



Arlington Conservation Commission

Date: Thursday, November 18, 2021

Time: 7:30 PM

Location: Conducted by Remote Participation

In accordance with the Governor's Order Suspending Certain Provisions of the Open Meeting Law, G. L. c. 30A, § 20 relating to the COVID-19 emergency, the October 7, 2021 public meeting of the Arlington Conservation Commission shall be physically closed to the public to avoid group congregation. The meeting shall instead be held virtually using Zoom. Please note: The listing of matters are those reasonably anticipated which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may be brought up for discussion to the extent permitted by law.

Agenda

1. Administrative

- a. Register in advance for this meeting:
<https://town-arlington-ma-us.zoom.us/meeting/register/tZ0of-mqrTwoE9T59CajDQrBoyvOlhxnKbHj>
Meeting ID: 895 8023 7290

Telephone: +1 301 715 8592 or +1 312 626 6799 or +1 646 876 9923 or +1 253 215 8782 or +1 346 248 7799 or +1 408 638 0968 or +1 669 900 6833

- b. 7:30 p.m. Meeting minutes 11042021 [Susan Chapnick]
Myra Schwartz application for Assistant Commissioner [Susan Chapnick]
Cooke's Hollow site visit [Ryan Clapp]
Thorndike Place ZBA update [David Morgan]
Water Bodies Working Group updates [David White, Chuck Tirone]

2. Discussion

- a. 8:00 p.m. Aerators at Hill's Pond [Ellen Reed]
- b. 8:15 p.m. CPA projects [Pam Heidell]

3. Hearings

Notice of Intent: 1 Cross Street [LEC]

- 8:30 p.m. Notice of Intent: 1 Cross Street [LEC]
MassDEP File #091-xxxx

Request for Determination of Applicability: 64 Wright Street

8:45 p.m. Request for Determination of Applicability: 64 Wright Street [LEC]
MassDEP File #091-xxxx

4. Updates

a. 9:00 p.m. Fiscal Year Offset [Jenny Raitt]



Town of Arlington, Massachusetts

Administrative

Summary:

7:30 p.m. Meeting minutes 11042021 [Susan Chapnick]
Myra Schwartz application for Assistant Commissioner [Susan Chapnick]
Cooke's Hollow site visit [Ryan Clapp]
Thorndike Place ZBA update [David Morgan]
Water Bodies Working Group updates [David White, Chuck Tirone]

ATTACHMENTS:

Type	File Name	Description
Reference Material	MyraResume2020.pdf	Myra Resume 2020
Reference Material	Correspondence_received_from_B._Melofchik_with_7_attachments_received_11-17-2021.pdf	Correspondence with 7 Attachments from B. Melofchik received 11-17-2021
Reference Material	Attachment_1_from_B._Melofchik_received_11-17-21jpg.jpg	Attachment 1 from B. Melofchik received 11-17-2021
Reference Material	Attachment_2_from_B._Melofchik_received_11-17-21jpg.jpg	Attachment 2 from B. Melofchik received 11-17-2021
Reference Material	Attachment_3_from_B._Melofchik_received_11-17-21.jpg	Attachment 3 from B. Melofchik received 11-17-2021
Reference Material	Attachment_4_from_B._Melofchik_received_11-17-21.jpg	Attachment 4 from B. Melofchik received 11-17-2021
Reference Material	Attachment_5_from_B._Melofchik_received_11-17-21.jpg	Attachment 5 from B. Melofchik received 11-17-2021
		Attachment 6

- Reference Material Attachment_6_from_B._Melofchik_received_11-17-21.jpg from B.
Melofchik
received 11-17-
2021
- Reference Material Attachment_7_from_B._Melofchik_received_11-17-21.jpg Attachment 7
from B.
Melofchik
received 11-17-
2021

Myra S. Schwartz
272 Highland Ave.
Arlington, MA 02474
Work: (617) 918-1696

EXPERIENCE

Program Manager, Environmental Protection Specialist (GR13), Land Chemicals and Redevelopment Division/Brownfields and Sustainable Materials Management Section, Boston, MA, 2019-present. Region I lead for the Environmental Workforce Development and Job Training program; lead on Sustainability Practices/Green Energy/and Resiliency, 2019-present. Accomplishments include: Instrumental in changing national policy on incorporating green infrastructure and stormwater management into the FY21 Environmental Workforce Development and Job Training grants program; serving as the technical contact and Project Officer on Healthy Communities and Pollution Prevention grants on green infrastructure, stormwater, watershed management and green energy. Awarded funding from the Office of Water, Non-Point Source program for a pilot, “Incorporating Green Infrastructure into local Hazard Mitigation plans in the Mystic River Watershed”. Responsibilities include: managing and coordinating project; Organizing/conducting presentation at the national 2020 virtual NPS conference, Sept. 2019-present.

Environmental/Stormwater Planner, Office of Assistance and Pollution Prevention, 2004-2019. Environmental Protection Specialist (GR13).

Work has involved implementing a number of regional and national priority initiatives and teams, including: Stormwater and Green Infrastructure, *Making a Visible Difference Lawrence, Bridgeport and Hinsdale*, and *Sustainable Knowledge Corridor Initiative*. Have been involved with developing and implementing the Regional Integrated Stormwater Strategy, in particular activities related to LID and Green Infrastructure, 2008-2019. This has involved cross program coordination, working closely with EPA ORD, Atlantic Ecology Division, OEP’s water programs, OSRR Brownfields program, and OES enforcement. Have played a leadership role on LID/Green Infrastructure towards implementing the use of techniques within OES (SEPs), A&P2 and in the region, developing tools and resources, and assisting in the development of the GI/LID technical documents; and Project officer and Technical contact on a number of Healthy Communities, EJ and Pollution Prevention grants. These accomplishments are summarized below:

Soak Up the Rain New England webinar series. Organized and conducted a webinar series “Soak Up the Rain New England”, focusing on success stories and resources related to implementing green infrastructure, Dec., 2015-present. Conducted a joint webinar with Office of Water “Lessons Learned on Integrating Water Quality and Nature-based Approaches into Hazard Mitigation Plans” Watershed Academy.

Rain Garden/Green Infrastructure Trainings. Have organized and conducted rain garden trainings in New England including: Bridgeport, CT, Hartford, CT, Worcester, MA, Providence,

RI., E. Boston and Federal facilities, partnering with city, federal and state agencies; and neighborhood/watershed groups: 2010-2015.

Green Infrastructure Workshops. Project Manager in organizing, implementing and coordinating a contract to conduct Green Infrastructure workshops for the development community, to support the Sustainable Knowledge Corridor Initiative priority. Partners included: ORD, Atlantic Ecology Division, University of Massachusetts, and the Pioneer Valley Planning Commission, (“Nuts & Bolts of Green Infrastructure”; and a GI workshop and vendor fair), 2013-2014, Holyoke Community College.

MS4/LID Clinics. Project Manager in implementing and coordinating a contract to conduct MS4/LID clinics in New England-the first cross program major effort to implement the Integrated Stormwater Strategy towards providing needed technical assistance on the recently issued MS4 permits for Massachusetts and New Hampshire. This involved: coordinating cross office reviews (w/OEP staff) to produce four technical documents to be used in clinics and posted for wide audience on the EPA website to provide guidance to MS4 regulated community; and leveraging cross program resources and monies resulting in an increase in funding and scope of these clinics from \$6,000-\$50, 000.

LID Conferences. Organized and conducted four LID conferences (with OEP and external State partners) for the Development and MS4 communities: “LID for the Development Community”, and LID for Northern Climates”, held in Vermont, Maine and New Hampshire, partnering with regional NEMO programs.

LID SEPs. Developed LID/Green Infrastructure SEPs projects for use in Stormwater enforcement cases, which has resulted in: eight MS4 settlements (out of 9 cases) that have utilized LID SEPS. Provided on-going technical assistance to ORC staff on specific LID SEPs being developed.

Technical Contact/Project Officer on Healthy Communities and Pollution Prevention grants. Responsible for providing technical reviews and input related to deliverables related to Green Infrastructure, stormwater and watershed projects. Provided reviews and input into Quality Assurance Project plans.

Resiliency/Hazard Mitigation/Area-Wide Planning and technical assistance. Activities included: Identifying opportunities to deliver training and technical assistance integrating Green Infrastructure and sustainable practices into grant projects and Initiatives including hazard mitigation and the Land Revitalization program, and stormwater management.

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Brownfields Project Manager, Environmental Protection Specialist (GR13/5), Office of Site Remediation & Restoration, Boston, MA, 2002-t. Responsible for overseeing the administration of Brownfields Cooperative Agreement grants. Provide technical assistance on all aspects of grant implementation related to assessment, clean-up and redevelopment of sites. Represent the Brownfields team on the Region I Urban River Restoration Initiative; and the Regional Reuse,

and the Smart Growth teams. Received National Notable Achievement Award, awarded to Brownfields Team, 2002-2004.

Massachusetts Watershed Coordinator, Environmental Protection Specialist (GR13/5), MA Office of Ecosystem Protection, Environmental Protection Agency, Boston, MA, 1996-2002.

Responsible for facilitating, overseeing and coordinating EPA's assistance to twenty-seven watersheds in Massachusetts, in support of the Massachusetts Watershed Initiative. Provided technical assistance to state agencies and watershed associations in the areas of: citizen volunteer monitoring, water quality sampling, Geographic Information Systems (GIS), stormwater management, non-point source pollution, NPDES permitting, TMDL (Total Daily Maximum Daily Loads) program, funding opportunities, and overall watershed protection efforts. Coordinated citizen volunteer monitoring and water quality sampling assistance with staff from the Office of Environmental Measurement and Evaluation, including the development of Quality Assurance Project plans. Involved with TMDL development, implementation and enforcement dealing with stormwater and CSO issues. Reviewed, coordinated, and prepared formal comments to DEP on water quality assessments. Reviewed and prepared formal comments on NEPA/MEPA projects. Developed and coordinated procedures for conducting reviews and obtaining comments from watershed groups that addressed water quality issues of concern in NPDES permits. Project Officer of watershed grants. Received Employee of the Month, May, 1999.

Massachusetts State Coordinator, Environmental Protection Specialist (GR12), Underground Storage Tanks Program, Environmental Protection Agency, 1993-96.

Managed State Underground Storage Tanks Program. Provided technical support to Underground Storage Tanks Program managers of the Department of Environmental Protection (DEP) and Department of Fire Services (DPS) in administering State program. Initiated and provided technical assistance to state program staff to implement work programs; supervised state leak prevention programs to ensure states were meeting all commitments and were carrying out the programs consistent with Subtitle I of RCRA. Provided technical support to State agencies in delegation and overview of the UST program; Work Assignment Manager (WAM). Provided oversight and technical direction for contractors in conducting TQM Streamlining work assignments; provided technical assistance to owners/operators and the general public on regulatory requirements. Certified UST Inspector. Conducted over 100 inspections, conducted enforcement actions with state, municipal and private facilities, issued field citations and provided technical assistance to owners/operators for minor violations involving leak detection and corrective action (21E). Developed and implemented a regional enforcement strategy and technical assistance program targeting drinking water supplies, in cooperation with Office of Ecosystem Protection and State DEP and Office of Fire Safety. Received EPA RCRA/UST Excellence in Performance Award, 1995, EPA Time-Off Award, 1994.

Environmental Protection Specialist, (Grade 12) Department of Housing and Urban Development, Boston, MA, 1991-93.

Responsible for implementing and insuring compliance with NEPA/MEPA and all environmental

federal and state laws, regulations, and executive orders that are applicable to HUD Housing and Community Development programs. Monitored and conducted enforcement activities at state and local agencies for environmental compliance, and provided training and technical assistance to HUD grantees on all areas of environmental compliance including: flood plain management, wetlands protection, Clear Water Act, NPDES permitting, RCRA, CERCLA, Asbestos NESHAP, and Historic Preservation. Organized and conducted a region-wide training for grantees and staff. Provided guidance and prepared educational materials on environmental regulatory requirements to HUD staff and grantees. Coordinated technical assistance and compliance with EPA and other federal and state environmental agencies. Received Outstanding Performance Award, 1992.

Environmental Planner, CH2M Hill, Boston, MA, 1989-1990.

Project Manager for Environmental Impact Report for the Combined Sewer Overflow (CSO) Facilities Plan developed for the Massachusetts Water Resources authority. Supervised three subcontractors in conducting environmental impact assessments of land uses, recreational and visual resources, planning consistency, and permitting. Conducted planning and citizen participation in the areas of solid-waste and hazardous-waste management.

Senior Planner, Boston Redevelopment Authority, Harbor Planning and Development, Boston, MA, 1986-1989.

Project Manager for a plan to rezone the Boston Inner Harbor waterfront. Supervised project team, consultants and interns in land use and zoning analyses. Coordinated citizen participation development of planning and zoning recommendations. Supervised and coordinated planning and development of water transportation activities. Planner on the Boston "Harborwalk" design team which resulted in the development of guidelines and requirements for developers to create the "Harborwalk" along the Boston waterfront. Managed production of planning documents and reports. Provided technical assistance to staff and developers on environmental regulatory, permitting and MEPA requirements. Held primary responsibility or reviewing Environmental Impact Reports and Board of Appeal cases for waterfront projects.

Environmental Planner. Department of Environmental Protection, Division of Air Quality Control, Boston, MA 1984-86.

Project Manager for the Massachusetts Community Right-to-Know program. Developed and implemented policies and procedures for a statewide compliance program. Coordinated activities with other state agencies and environmental program. Supervised implementation of all program activities in regional offices. Developed and managed statewide technical assistance, public information, and training programs for municipal officials and the general public. Established and worked with citizen advisory group. Managed the production and distribution of brochures, fact sheets, press releases, and compliance handbook.. Assisted in the development of a data system to serve three state agencies. Managed three RFPs and resulting contracts.

Assistant Planner/Program Manager. Department of Environmental Protection, Division of

Water Supply, Boston, MA, 1982-83.

Developed and implemented a Water Conservation Grants program. Developed regulations and selection criteria in collaboration with other state and local programs. Established and worked with a citizen advisory group. Developed a statewide technical assistance and public information program. Conducted technical assistance workshops and conferences.

EDUCATION

Master of Regional Planning. Department of Landscape Architecture and Regional Planning. University of Massachusetts, Amherst, MA, 1986.

Concentration: Water Resources/Environmental Planning and Citizen Participation

Thesis Project: Conducted an Environmental Impact Assessment with recommendations of point-source water quality problems on the Millers River, which were incorporated into a watershed management plan developed by the Department of Environmental Management.

Master of Arts in Education. Oakland University, Rochester, MI, 1971.

Bachelor of Arts. University of Denver, CO, 1969.

Major: Political Science

Other

Harvard University, Graduate School of Design, Cambridge, MA, 1978. Summer program in Landscape Architecture.

Radcliffe College, Graduate Program in Landscape, Spring, 1990.

Additional Coursework: Wetlands Ecology (Harvard Extension and U of MA, Amherst, and University of MA, Boston..

From: Beth Melofchik <tankmadel@yahoo.com>
To: "David Morgan" <DMorgan@town.arlington.ma.us>
Cc: Ellen Cohen <elscorn@aol.com>
Date: Wed, 17 Nov 2021 20:25:57 +0000 (UTC)
Subject: [ConComm] 8 trees cut off at base at Cookes Hollow

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

CAUTION: This email originated from outside of the Town of Arlington's email system. Do not click links or open attachments unless you recognize the REAL sender (whose email address in the From: line in "<>" brackets) and you know the content is safe.

Dear Conservation Commission,

Please find attached photos of the 8 trees cut off at the base in Cookes Hollow last week and one photo of the 2 majestic pines which had many branches removed.

Diameters of the trees range from 9.5 inches to 3 inches.

To what point in Cookes Hollow does the prerogative of the Police Department weigh?

This is a small pocket park, a hidden gem, now not so hidden as the tree canopy has been compromised along the entrance path and along the wall with Cusack Terrace.

The Mulberry was 5 feet 8 inches from the parking pad yet it was cut down due to proximity so as not to inhibit parking I was told, this already inside the park parameters

The 9.5 inch diameter tree near entrance was 7 feet from the wall abutting the parking lot.

Many branches taken off of what appears to be a Locust near Cusack Terr, why?

I present these photos and ask these questions politely.

At what point do we stop removing trees from Conservation land? At what point do we recognize the imperative of the UN's declaration of Code Red and the need to preserve trees and tree canopy for community health and well being and the public good and to mitigate extreme heat events?

Thank you

Kind regards,
Beth Melofchik, Town Meeting Member Precinct 9

















Town of Arlington, Massachusetts

Aerators at Hill's Pond

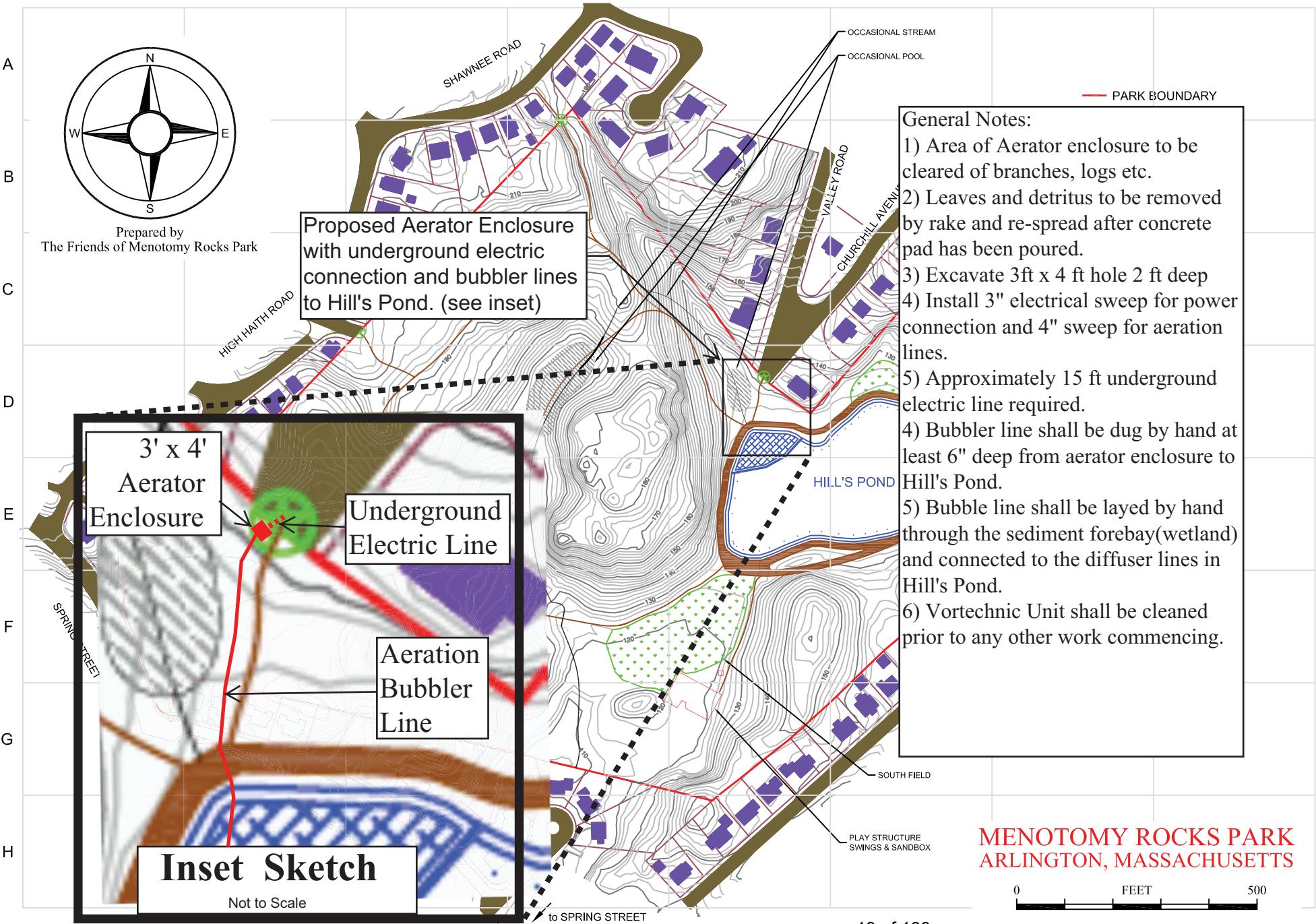
Summary:

8:00 p.m. Aerators at Hill's Pond [Ellen Reed]

ATTACHMENTS:

Type	File Name	Description
Reference Material	Hills_Pond_91-271_Aeration_System_Sketch_May2016.pdf	Hill's Pond Aeration System Sketch 5-2016

1 2 3 4 5 6 7 8





Town of Arlington, Massachusetts

Notice of Intent: 1 Cross Street [LEC]

Summary:

8:30 p.m. Notice of Intent: 1 Cross Street [LEC]
MassDEP File #091-xxxx

ATTACHMENTS:

Type	File Name	Description
❑ Reference Material	NOI_Application_-_1_Cross_Street.pdf	NOI Application 1 Cross Street
❑ Reference Material	M_Novak_Attachment_1_21-38_Site NOI_received_11-17-21.pdf	21-38 Site NOI received 11-17-2021
❑ Reference Material	M_Novak_Attachment_2_21-38_Flood_Storage_Exhibit_received_11-17-21.pdf	21-38 Flood Storage Exhibit received 11-17-2021

Notice of Intent Application

November 4, 2021



Subject Property

1 Cross Street
Parcel ID: 24-3-4
Arlington, Massachusetts

Applicant and Property Owner

Timothy Kresl
1 Cross Street
Arlington, MA 02474

LEC Environmental Consultants, Inc.

380 Lowell Street
Suite 101
Wakefield, MA 01880
781-245-2500

www.lecenvironmental.com

November 4, 2021

Hand Delivery

Arlington Conservation Commission
Arlington Town Hall Annex
730 Massachusetts Avenue
Arlington, MA 02476

Re: Notice of Intent Application [LEC File #: KreT\21-383.02]
1 Cross Street
Parcel ID: 24-3-4
Arlington, Massachusetts

Dear Members of the Conservation Commission:

On behalf of the Applicant and Property Owner, Timothy Kresl, LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application with the Arlington Conservation Commission to construct an addition to a single-family dwelling and reconfigure a shed, deck, patio, and driveway at 1 Cross Street in Arlington, Massachusetts. The proposed activities are located within Riverfront Area, Bordering Land Subject to Flooding (BLSF), and the 100-foot Buffer Zone to Bank associated with Alewife Brook. The Applicant proposes to implement erosion controls to minimize the potential for impacts to the resource areas during construction, provide stormwater management, compensatory flood storage, and native landscaping.

LEC was retained to identify Wetland Resource Areas protectable under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40, the *Act*), its implementing Regulations (310 CMR 10.00, the *Act Regulations*), the *Town of Arlington Wetlands Protection Bylaw* (Article 8, the *Bylaw*), and its implementing *Wetlands Protection Regulations* (March 1, 2018, the *Bylaw Regulations*), and to prepare this NOI Application. Patriot Engineering has prepared the enclosed *Site Plan (To Accompany a NOI)* dated October 26, 2021 showing the existing and proposed conditions (Appendix B), and the *Stormwater Analysis and Calculations* also dated October 26, 2021 (Appendix C).

Enclosed please find two checks made payable to the Town of Arlington in the amounts of Ninety-Five Dollars (\$95.00) and Two Hundred Dollars (\$200.00) for the purpose of filing this Application under State and Local guidelines, respectively. A check payable to the Commonwealth of Massachusetts in the amount of Seventy Dollars (\$70.00) has been mailed to the DEP Lockbox with a copy of the NOI Wetland Fee Transmittal Form.



Thank you for your consideration of this Application. We look forward to meeting with you at the November 18, 2021 Public Hearing. Should you have any questions, please do not hesitate to contact me in our Wakefield office at 781-245-2500 or at rkirby@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read "Richard A. Kirby".

Richard A. Kirby

Senior Wetland Scientist

cc: DEP, Northeast Region
Tim Kresl
Patriot Engineering

jah: projects\21-383.02\NOIReport.doc

- i. WPA Form 3 – Notice of Intent
- ii. WPA Appendix B – Wetland Fee Transmittal Form
- iii. Local Filing Fee Form
- iv. Affidavit of Service
- v. Letter to Abutters
- vi. Abutter Notification Form
- vii. Certified List of Abutters

Notice of Intent Report

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Literature Cited**Appendices**

Appendix A

Locus Maps

Figure 1: USGS Topographic Quadrangle

Figure 2: FEMA Flood Insurance Rate Map

Figure 3: MassGIS Orthophoto & NHESP Estimated Habitat Map

Appendix B

Site Plan (To Accompany a NOI) prepared by Patriot Engineering

dated October 26, 2021

Appendix C

Stormwater Analysis and Calculations prepared by Patriot Engineering

Dated October 26, 2021



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Arlington Wetlands Protection Bylaw (Article 8)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

1 Cross Street

a. Street Address

Arlington

02474

b. City/Town

c. Zip Code

42.404510 N

-71.135040 W

d. Latitude

e. Longitude

24-3-4

f. Assessors Map/Plat Number

g. Parcel /Lot Number

2. Applicant:

Timothy

a. First Name

Kresl

b. Last Name

c. Organization

1 Cross Street

d. Street Address

Arlington

MA

02474

e. City/Town

f. State

g. Zip Code

781-820-9180

N/A

h. Phone Number

i. Fax Number

kapc@verizon.net

j. Email Address

3. Property owner (required if different from applicant): Check if more than one owner

Same as Applicant

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Richard

a. First Name

Kirby

b. Last Name

LEC Environmental Consultants, Inc.

c. Company

380 Lowell Street, Suite 101

d. Street Address

Wakefield

MA

01880

e. City/Town

f. State

g. Zip Code

781-245-2500

781-245-6677

h. Phone Number

i. Fax Number

rkirby@lecenvironmental.com

j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

\$165.00

a. Total Fee Paid

\$70.00

b. State Fee Paid

\$95.00 (+ \$200.00 Bylaw Fee)

c. City/Town Fee Paid



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Arlington Wetlands Protection Bylaw (Article 8)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

A. General Information (continued)

6. General Project Description:

The Applicant proposes to construct an addition and reconfigure site appurtenances at 1 Cross Street in Arlington, Massachusetts. The proposed activities are located within Riverfront Area, Bordering Land Subject to Flooding, and the 100-foot Buffer Zone to a Bank associated with Alewife Brook. The Applicant proposes to implement erosion controls to minimize the potential for impacts to the resource areas during construction, and provide stormwater management, compensatory flood storage, and native landscaping.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation |
| 9. <input type="checkbox"/> Other | |

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Southern Middlesex

a. County

60473

c. Book

N/A

b. Certificate # (if registered land)

376

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Arlington Wetlands Protection Bylaw (Article 8)

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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet
 <u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	60± 1. square feet 151± 3. cubic feet of flood storage lost	783± 2. square feet 318± 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input checked="" type="checkbox"/> Riverfront Area	Alewife Brook (inland) 1. Name of Waterway (if available) - specify coastal or inland	
2. Width of Riverfront Area (check one):		
<input type="checkbox"/> 25 ft. - Designated Densely Developed Areas only		
<input type="checkbox"/> 100 ft. - New agricultural projects only		
<input checked="" type="checkbox"/> 200 ft. - All other projects		
3. Total area of Riverfront Area on the site of the proposed project:	4,300 square feet	
4. Proposed alteration of the Riverfront Area:		
734± a. total square feet	23± b. square feet within 100 ft.	711± c. square feet between 100 ft. and 200 ft.
5. Has an alternatives analysis been done and is it attached to this NOI?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6. Was the lot where the activity is proposed created prior to August 1, 1996?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3. <input type="checkbox"/> Coastal Resource Areas: (See 310 CMR 10.25-10.35)		

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Arlington Wetlands Protection Bylaw (Article 8)

Provided by MassDEP:

MassDEP File Number

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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet	2. cubic yards dredged
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	1. square feet	2. cubic yards dune nourishment
<u>Size of Proposed Alteration</u> <u>Proposed Replacement (if any)</u>		
f. <input type="checkbox"/> Coastal Banks	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet	
h. <input type="checkbox"/> Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet	
j. <input type="checkbox"/> Land Containing Shellfish	2. cubic yards dredged	
k. <input type="checkbox"/> Fish Runs	1. square feet	
Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above		
	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	1. square feet	
4. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
a. square feet of BVW		
b. square feet of Salt Marsh		
5. <input type="checkbox"/> Project Involves Stream Crossings		
a. number of new stream crossings		
b. number of replacement stream crossings		



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Arlington Wetlands Protection Bylaw (Article 8)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

- Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

- a. Yes No

If yes, include proof of mailing or hand delivery of NOI to:

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

2021

b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); OR complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:

(a) within wetland Resource Area	percentage/acreage
(b) outside Resource Area	percentage/acreage

2. Assessor's Map or right-of-way plan of site

2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

(a) Project description (including description of impacts outside of wetland resource area & buffer zone)

(b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/massachusetts-endangered-species-act-mesa-regulatory-review>).

Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Arlington Wetlands Protection Bylaw (Article 8)

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Arlington

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C. Other Applicable Standards and Requirements (cont'd)

- (c) MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).

Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) Vegetation cover type map of site

- (e) Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. Project is exempt from MESA review.

Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. Separate MESA review ongoing.

a. NHESP Tracking #

b. Date submitted to NHESP

3. Separate MESA review completed.

Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

- a. Not applicable – project is in inland resource area only b. Yes No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and North Shore - Hull to New Hampshire border:
the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

- c. Is this an aquaculture project?

- d. Yes No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Arlington Wetlands Protection Bylaw (Article 8)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

C. Other Applicable Standards and Requirements (cont'd)

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
- a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
-
- b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
- a. Yes No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
- a. Yes No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
- a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
 2. A portion of the site constitutes redevelopment
 3. Proprietary BMPs are included in the Stormwater Management System.
- b. No. Check why the project is exempt:
1. Single-family house (required under Bylaw)
 2. Emergency road repair
 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Arlington Wetlands Protection Bylaw (Article 8)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

D. Additional Information (cont'd)

3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
4. List the titles and dates for all plans and other materials submitted with this NOI.

Site Plan (To Accompany a NOI)

a. Plan Title

Patriot Engineering

Michael Novak, PE

b. Prepared By

c. Signed and Stamped by

October 26, 2021

1" = 10'

d. Final Revision Date

e. Scale

Stormwater Analysis and Calculations prepared by Patriot Engineering

October 26, 2021

f. Additional Plan or Document Title

g. Date

5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8. Attach NOI Wetland Fee Transmittal Form
9. Attach Stormwater Report, if needed. (Required per Bylaw)

E. Fees

1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

242

10/26/2021

2. Municipal Check Number

3. Check date

241

10/26/2021

4. State Check Number

5. Check date

Timothy B.

Kresl

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Arlington Wetlands Protection Bylaw (Article 8)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant

10/26/2021

2. Date

3. Signature of Property Owner (if different)

5. Signature of Representative (if any)

4. Date

10/26/2021

6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



Massachusetts Department of Environmental Protection

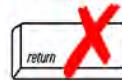
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Arlington Wetlands Protection Bylaw (Article 8)

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

1 Cross Street

a. Street Address

241

c. Check number

Arlington

b. City/Town

\$70.00

d. Fee amount

2. Applicant Mailing Address:

Timothy

a. First Name

Kresl

b. Last Name

c. Organization

1 Cross Street

d. Mailing Address

Arlington

e. City/Town

MA

f. State

02474

g. Zip Code

h. Phone Number

N/A

i. Fax Number

tkresl@gmail.com

j. Email Address

3. Property Owner (if different):

Same as Applicant

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

B. Fees

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Arlington Wetlands Protection Bylaw (Article 8)

B. Fees (continued)

C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

Bylaw Filing Fees and Transmittal Form

Rules:

1. Fees are payable at the time of filing the application and are non-refundable.
2. Fees shall be calculated per schedule below.
3. Town, County, State, and Federal Projects are exempt from fees.
4. These fees are in addition to the fees paid under M.G.L. Ch. 131, s.40 (ACT).

Fee Schedule (ACC approved 1/8/15):

\$	No./Area	Category
		(R1) RDA - \$150 local fee, no state fee
\$200.00	1	(N1) Minor Project - \$200 (house addition, tennis court, swimming pool, utility work, work in/on/or affecting any body of water, wetland or floodplain).
		(N2) Single Family Dwelling - \$600
		(N3) Multiple Dwelling Structures - \$600 + \$100 per unit all or part of which lies within 100 feet of wetlands or within land subject to flooding.
		(N4) Commercial, Industrial, and Institutional Projects - \$800 + 50¢/s.f. wetland disturbed; 2¢/s.f. land subject to flooding or buffer zone disturbed.
		(N5) Subdivisions - \$600 + \$4/l.f. feet of roadway sideline within 100 ft. of wetlands or within land subject to flooding.
		(N6) Other Fees - copies, printouts; per public records law
		(N7) Minor Project Change - \$50
		(N8) Work on Docks, Piers, Revetments, Dikes, etc - \$4 per linear foot
		(N9) Resource Boundary Delineation (ANRAD) - \$1 per linear foot
		(N10) Certificate of Compliance (COC or PCOC) - No charge if before expiration of Order, \$200 if after that date.
		(N11) Amendments - \$300 or 50% of original local filing fee, whichever is less.
		(N12) Extensions - <ul style="list-style-type: none"> a. Single family dwelling or minor project - \$100. b. Other - \$150.
		(N13) Consultant Fee -per estimate from consultant
\$200.00	TOTAL	

Note: Submit this form along with the forms submitted for the ACT - the "Wetlands Filing Fee Calculations Worksheet," and the "Notice of Intent Fee Transmittal Form."

AFFIDAVIT OF SERVICE

Under the
Massachusetts Wetlands Protection Act (M.G.L. c. 131, s. 40),
its implementing *Regulations* (310 CMR 10.00),
and the
the *Town of Arlington Wetlands Protection Bylaw*

I, Sharon A. Sullivan, on behalf of Timothy Kresl, hereby certify under the pains and penalties of perjury that on November 4, 2021 I gave notification to abutters in compliance with the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and the *Town of Arlington Wetlands Protection Bylaw* in connection with the following matter:

A Notice of Intent Application filed under the *Massachusetts Wetlands Protection Act* and the *Town of Arlington Wetlands Protection Bylaw* by LEC Environmental Consultants, Inc. on behalf of the Applicant, Timothy Kresl, with the Town of Arlington Conservation Commission on November 4, 2021 for property located at 1 Cross Street (Assessor's Parcel ID: 24-3-4) in Arlington, Massachusetts.

The form of notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

Sharon A. Sullivan
Sharon A. Sullivan
Permitting Technician

11/4/2021
Date

November 4, 2021

CERTIFIED MAIL

«Name»
«Name2»
«Address»
«City», «State» «Zip»

Re: Notice of Intent Application
1 Cross Street
Assessor's Parcel ID: 24-3-4
Arlington, Massachusetts

[LEC File #: KreT\21-383.02]

Dear Abutter:

On behalf of the Applicant, Timothy Kresl, LEC Environmental Consultants, Inc. (LEC) has filed a Notice of Intent Application with the Arlington Conservation Commission to construct an addition to a single-family dwelling and reconfigure a shed, deck, patio, and driveway at 1 Cross Street in Arlington, Massachusetts. The proposed activities are located within Riverfront Area, Bordering Land Subject to Flooding, and the 100-foot Buffer Zone to Bank associated with Alewife Brook, jurisdictional under the *Massachusetts Wetlands Protection Act* (the *Act*, M.G.L. c. 131, s. 40) and its implementing *Regulations* (the *Act Regulations*, 310 CMR 10.00), and the *Town of Arlington Wetlands Protection Bylaw* (Article 8, the *Bylaw*) and its *Regulations Pursuant to the Town of Arlington Regulations for Wetlands Protection* (the *Bylaw Regulations*). The Applicant proposes to implement erosion controls to minimize the potential for impacts to the resource areas during construction, provide stormwater management, compensatory flood storage, and native landscaping.

The Notice of Intent Application and accompanying plans are available for review by contacting the Arlington Conservation Commission. The remote Public Hearing will be held on November 18, 2021 beginning at 7:30 p.m., in accordance with the provisions of the *Act*, *Regulations*, *Bylaw*, and *Bylaw Regulations*. Further information regarding this application will be published at least five (5) days in advance in *The Arlington Advocate*. Notice of the Public Hearing will also be posted at the Arlington Town Hall at least 48 hours in advance. Please check the Town's website and the Board/Committee's page for any updated information on the meeting.

Please do not hesitate to review the materials and/or attend the public hearing should you have questions or concerns about the proposed project.

Sincerely,

LEC Environmental Consultants, Inc.



Richard A. Kirby
Senior Wetland Scientist

LEC Environmental Consultants, Inc.

www.lecenvironmental.com

12 Resnik Road Suite 1 Plymouth, MA 02360 508.746.9491	380 Lowell Street Suite 101 Wakefield, MA 01880 781.245.2500	100 Grove Street Suite 302 Worcester, MA 01605 508.753.3077	P. O. Box 590 Rindge, NH 03461 603.899.6726	680 Warren Avenue Suite 3 East Providence, RI 02914 401.685.3109 39 of 139
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Notification to Abutters Under the
Massachusetts Wetlands Protection Act
and the
Town of Arlington Wetlands Protection Bylaw

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and the Town of Arlington Wetlands Protection Bylaw, you are hereby notified of the following:

- A. The name of the Applicant is Timothy Kresl, 1 Cross Street, Arlington, Massachusetts.
- B. The Applicant has filed a Notice of Intent Application with the Conservation Commission for the municipality of Arlington, Massachusetts seeking permission to remove, fill, dredge or alter an Area Subject to Protection under Wetlands Protection Act (General Laws Chapter 131, Section 40) and the Town of Arlington Wetlands Protection Bylaw.
- C. The activity is proposed on a lot located at 1 Cross Street (Assessor's Parcel ID: 24-3-4), Arlington, Massachusetts.
- D. Copies of the Notice of Intent Application may be examined by contacting the Arlington Conservation Commission at (781) 316-3012.

For more information, call: LEC Environmental Consultants, Inc. (the Applicant's representative) at (781) 245-2500.

- E. Copies of the Notice of Intent Application may be obtained from LEC Environmental Consultants, Inc. (the applicant's representative) by calling (781) 245-2500 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. A fee may be charged for each copy requested.
- F. Information regarding the public hearing may be obtained from the Arlington Conservation Commission (the regulatory agency) by calling (781) 316-3012.

NOTE: Notice of the Public Hearing, including its date, time, and place, will be published at least five (5) days in advance in The Arlington Advocate.

NOTE: Notice of the public hearing will also be posted at the Arlington Town Hall not less than 48 hours in advance.

NOTE: You also may contact the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:
Northeast Region: 978-694-3200



Office of the
Board of Assessors
Robbins Memorial Town Hall
Arlington, MA 02476
(781) 316-3050
Assessors@town.arlington.ma.us

Abutters List

Date: October 15, 2021

Subject Property Address: 1 CROSS ST Arlington, MA
Subject Property ID: 24-3-4

Search Distance: 100 Feet

The Board of Assessors certifies the names and addresses of requested parties in interest, all abutters within 100 feet of the property lines, of subject property.

A handwritten signature in black ink, appearing to read "Robert E. Greeley".

Board of Assessors

Abutters List

Date: October 15, 2021

Subject Property Address: 1 CROSS ST Arlington, MA
Subject Property ID: 24-3-4

Search Distance: 100 Feet

Prop ID: 24-3-2

Prop Location: 11 CROSS ST Arlington, MA
Owner: MARLIN ROBERT
Co-Owner: MARLIN-CURIEL STEPHANIE
Mailing Address:
11 CROSS ST
ARLINGTON, MA 02474

Prop ID: 24-3-3

Prop Location: 7 CROSS ST Arlington, MA
Owner: LACKY WILLIAM/SONIA
Co-Owner:
Mailing Address:
7 CROSS ST
ARLINGTON, MA 02474

Prop ID: 24-3-4

Prop Location: 1 CROSS ST Arlington, MA
Owner: KRESL TIMOTHY B
Co-Owner:
Mailing Address:
1 CROSS ST
ARLINGTON, MA 02474

Prop ID: 24-4-1

Prop Location: 76 HENDERSON ST Arlington, MA
Owner: ROJO BRIAN K & MARY L
Co-Owner:
Mailing Address:
76 HENDERSON ST
ARLINGTON, MA 02474

Prop ID: 24-4-10

Prop Location: 71 TEEL ST Arlington, MA
Owner: ELLER BEN
Co-Owner: ELLER CHRISTINA CIOCCA
Mailing Address:
71 TEEL ST
ARLINGTON, MA 02474

Prop ID: 24-4-2

Prop Location: 72 HENDERSON ST Arlington, MA
Owner: SEMANAZ CHRISTOHE &
Co-Owner: CASSET-SEMANAZ FLORENCE
Mailing Address:
72 HENDERSON STREET
ARLINGTON, MA 02474

Prop ID: 24-5-1

Prop Location: 81 HENDERSON ST Arlington, MA
Owner: DUPEE KARIN A
Co-Owner:
Mailing Address:
81 HENDERSON ST
ARLINGTON, MA 02474

Prop ID: 24-5-2

Prop Location: 77 HENDERSON ST Arlington, MA
Owner: KESSELMAN JOSEPH J
Co-Owner:
Mailing Address:
77 HENDERSON STREET
ARLINGTON, MA 02474

Prop ID: 24-6-1

Prop Location: 0-LOT HENDERSON ST Arlington, MA
Owner: DEPT/CONSERVATION & RECREATION
Co-Owner: WATER SUPPLY PROTECTION DIV
Mailing Address:
20 SOMERSET ST
BOSTON, MA 02108

Prop ID: 24-6-2

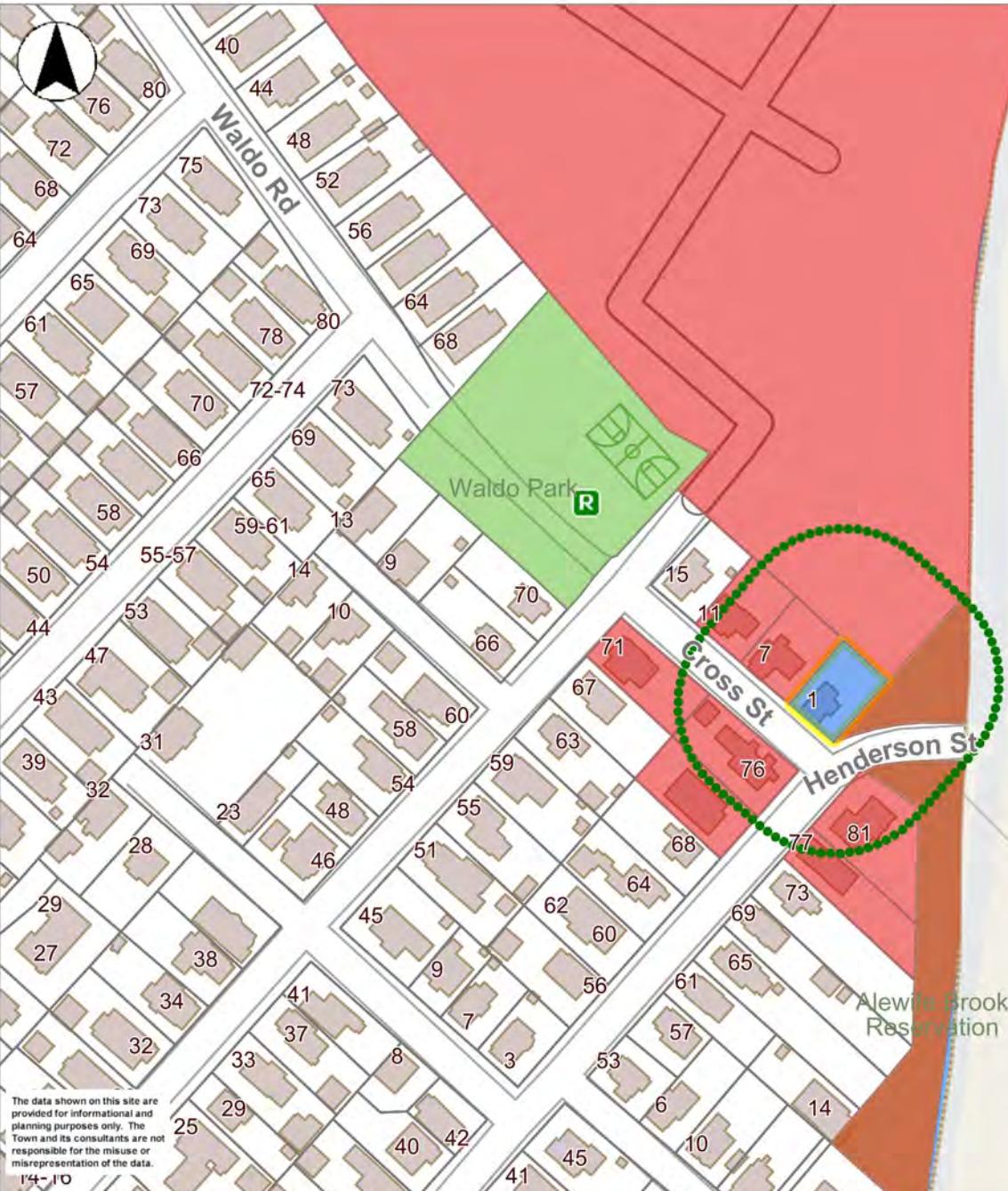
Prop Location: 0-LOT HENDERSON ST Arlington, MA
Owner: DEPT/CONSERVATION & RECREATION
Co-Owner: WATER SUPPLY PROTECTION DIV
Mailing Address:
20 SOMERSET ST
BOSTON, MA 02108

Prop ID: 26-6-16.A

Prop Location: 30 BROADWAY Arlington, MA
Owner: CATHOLIC CEMETARY ASSOC
Co-Owner: ARCHDIOCESE OF BOSTON
Mailing Address:
175 BROADWAY
MALDEN, MA 02148



- Places by Category
- Police Station
 - Fire Station
 - School
 - Library
 - Public Works
 - Recreation - Facilities
 - Recreation - Fields Courts
 - Recreation - Fields Courts
 - Open Space: Conservation
 - Open Space - Minuteman
 - Open Space - Labels
 - Open Space
 - Town, State, or Private
 - Other Town Owned
 - MA Highways
 - Interstate
 - US Highway
 - Numbered Routes
 - Abutting Towns
- Town Boundary
- Parcels
- Buildings
- Cemetery - Roads
- Road1
 - Road2
 - Road3
 - Road4
- Pavement Markings
- Impervious Surface - For B
- Street
 - Sidewalk
 - Street Island
 - Driveway
 - Parking Lot
 - Bike Path
- Roads - For Large Scale (f)
- Roads - For Small Scale (f)
- Major Road
 - Local Road
- Master Plan Base Map - M
- Water Line
- Water Body



SOMERVILLE

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CAMBRIDGE

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Notice of Intent Application

1 Cross Street
Assessor's Parcel ID: 24-3-4
Arlington, Massachusetts

November 4, 2021

1.**Introduction**

On behalf of the Applicant and Property Owner, Timothy Kresl, LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application with the Arlington Conservation Commission under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40, the *Act*), its implementing Regulations (310 CMR 10.00, the *Act Regulations*), the *Town of Arlington Wetlands Protection Bylaw* (Article 8, the *Bylaw*), and its implementing *Wetlands Protection Regulations* (March 1, 2018, the *Bylaw Regulations*). The Applicant is filing this NOI Application to construct an addition to a single-family dwelling, and reconfigure an existing shed, deck, patio, and driveway. Portions of the proposed activities are located within Riverfront Area, Bordering Land Subject to Flooding (BLSF), and the 100-foot Buffer Zone to Bank associated with Alewife Brook

As part of this filing, the Applicant proposes to implement mitigation measures, including erosion controls, stormwater management, compensatory flood storage, and native landscaping. The existing conditions and proposed activities are depicted on the *Site Plan (to Accompany a NOI)* (2 Sheets) dated October 26, 2021, and prepared by Patriot Engineering (*Site Plans*, Appendix B). Appendix C contains the *Stormwater Analysis and Calculations* also dated October 26, 2021 and prepared by Patriot Engineering (*Stormwater Report*).

2.**General Site Description**

The $4,300 \pm$ square foot property is located in a densely developed, residential neighborhood west of Alewife Brook, northeast of Route 3/2A, and south of the St. Paul Cemetery, within the southeastern portion of Arlington, Massachusetts. More specifically, the property is located immediately north of the Cross Street/Henderson Street intersection. Residential development associated with Cross Street and Henderson Street is located northwest, southwest, and south of the property, while the St. Paul Cemetery is located immediately north and town-owned land containing Alewife Brook occurs immediately east of the property.



Westerly view of rear of dwelling



Southerly view of patio and shed

The property contains a 2-story, single-family dwelling with a gravel driveway extending northeasterly from Cross Street on the northwestern side of the dwelling. A wooden deck and bulkhead occur off the rear of the dwelling, and a stone paver patio and shed occur within the western portion of the property. A wooden stockade fence and iron fence occur along the northeastern and southeastern property lines, respectively. The dwelling and site appurtenances are surrounded by lawn and landscape

plantings, including lilac (*Syringa* sp.), yew (*Taxus* sp.), and hosta (*Hosta* sp.). The property gently slopes to the west, with an elevation gradient of roughly two feet.

Wooded uplands occur southeast of the property on town-owned land, separating the site from Alewife Brook. A walking path extends through the woodland from Cross Street to the adjacent cemetery. The canopy is dominated by Norway maple (*Acer platanoides*), with scattered inclusions of honey locust (*Gleditsia triacanthos*), American elm (*Ulmus americana*), box elder (*Acer negundo*), and black cherry (*Prunus serotina*). The understory contains patches of sapling Norway maple, box elder, and Japanese knotweed (*Polygonum cuspidatum*), with scattered individuals of American hazelnut (*Corylus*



Northeasterly view of walking path through adjacent wooded uplands

americana), and sapling black cherry. A dense stand of Japanese knotweed occurs along the Banks of Alewife Brook. Scattered debris is strewn about the woodland, including brick and concrete fragments, cut logs, etc.

Utilizing a hand-held, Dutch-style soil auger, LEC inspected soil conditions within the wooded upland, and observed a 10-inch thick, loamy topsoil (A Horizon) with a soil matrix color of 2.5Y 3/2, underlain by a weathered, loamy sand subsoil (B_w Horizon) with a soil matrix color of 2.5Y 4/4. This soil profile is not considered hydric according to the *Field Indicators for Identifying Hydric Soils in New England* (Version 4, April 2019, the *Field Indicators Guide*).

2.1

Natural Heritage and Endangered Species Program Designation

According to the 15th Edition of the *Massachusetts Natural Heritage Atlas* (effective August 1, 2021) published by the Natural Heritage & Endangered Species Program (NHESP), no areas of Estimated Habitats of Rare Wildlife or Priority Habitat of Rare Species, or Potential or Certified Vernal Pools exist on the site (Appendix A, Figure 3).

3.

Wetland Resource Areas

LEC conducted a site evaluation on September 10, 2021 to identify and characterize existing protectable Wetland Resource Areas located on or immediately adjacent to the site, and to delineate the Bank-Mean Annual High Water (MAHW) Line associated with Alewife Brook. The extent of Wetland Resource Areas was determined through observations of existing plant communities and hydrologic indicators in accordance with the *Act*, its implementing *Regulations*, the *Bylaw*, and the *Bylaw Regulations*.

Based on these methods and review of pertinent maps, LEC determined that the Bank-MAHW Line to Alewife Brook occurs east of the property, and that the entire property is located within Riverfront Area and Bordering Land Subject to Flooding (BLSF). The Bank-MAHW Line also places the 100-foot Buffer Zone onto the western portion of the property. No Bordering Vegetated Wetlands (BVW) were observed.

3.1

Bank-Mean Annual High Water

According to 310 CMR 10.58 (2) (a) 2., *Mean Annual High-water Line of a river is the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. Field indicators of bankfull conditions shall be used to determine the mean annual high-water line. Bankfull field indicators include but are not limited to: changes in slope, changes in vegetation, stain lines, top of pointbars, changes in bank materials, or bank undercuts.*



Northeasterly view of Alewife Brook from Cross Street

The Bank-MAHW Line associated with Alewife Brook was determined through observation of multiple corroborating Bankfull Indicators, including scouring, wrack deposition, stain lines on adjacent infrastructure, changes in vegetation, and a relatively distinct

separation between predominantly aquatic and terrestrial land. A dense thicket of Japanese knotweed occurs along the Bank, with scattered Norway maple and American elm saplings and entanglements of grape (*Vitis* sp.).

3.2

Riverfront Area

According to 310 CMR 10.58 (2) (a), *A Riverfront Area is the area of land between a river's mean annual high water line and a parallel line measured horizontally. The*

riverfront area may include or overlap other resource areas or their buffer zones. The riverfront area does not have a buffer zone.

According to Section 9. L. of the *Bylaw, L.*, "Riverfront Area" shall mean the area of Land between a river's mean annual high water line and a parallel line measured 200 feet horizontally landward of the mean annual high water line.

Riverfront Area includes land within 200 feet of the Bank-MAHW line associated with Alewife Brook and encompasses the entire property. This 4,300± square foot area includes the existing dwelling, driveway, deck, shed, patio, and surrounding lawn area. The entire property is considered 'Previously Developed' and the footprints of the existing dwelling, driveway, deck, patio, and shed are considered 'Degraded' in accordance with 310 CMR 10.58 (5).

3.3

Bordering Land Subject to Flooding

According to 310 CMR 10.57 (2) (a) 1, *Bordering Land Subject to Flooding (BLSF)* is an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland.

According to the Section 4 B. (38) of the *Bylaw Regulations*, "land subject to flooding or inundation" shall mean the land within the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm; said boundary shall be that determined by reference to the most recently available flood profile data prepared for Arlington within which the work is proposed under the National Flood Insurance Program "(NFIP)" ...

According to the June 4, 2010 *Federal Emergency Management Agency Flood Insurance Rate Map* for Middlesex County, Massachusetts (Map No: 25017C0419E), the entire property is located within Zone AE: – *Special Flood Hazard Areas (SFHAs) subject to Inundation by the 1% Annual chance Flood; Base Flood Elevations determined* (Appendix A, Figure 2). According to the FEMA FIRM, the Zone AE occurs at the Elevation 7 contour (Datum: NAVD 88). According to the FEMA FIRM Profile Data, Plan, Zone AE at this site occurs at Elevation 6.8 (Datum NAVD 88). In an effort to be conservative, the Applicant presumes the BLSF elevation occurs at Elevation 7, which comprises virtually the entire lot. A small area above elevation 7 occurs along the northwestern edge of the dwelling.

4.**Proposed Activities**

The Applicant proposes to construct a $397\pm$ square-foot living space addition off the eastern corner of the dwelling, within the existing footprint of the wooden deck and adjacent lawn. The addition will be constructed atop a crawl-space foundation containing flood vents per FEMA Building Code requirements. The addition will be constructed at existing grade, with no flood displacement other than the concrete foundation walls. Compensatory flood storage is proposed to mitigate for the proposed displacement as further discussed below in Section 5.3. A new basement access measuring $34\pm$ square feet is proposed off the northwestern house façade.

The Applicant also proposes to construct a deck and stairs off the eastern corner of the new addition, reconfigure the existing stone paver patio roughly in the existing location, relocate a shed that is currently (partially) located on town land, and relocate the driveway.

Deck

The deck will measure $94\pm$ square feet (roughly the same size as the existing deck to be removed). While the deck and support joists will be situated above the floodplain elevation, the stairs descending to existing grade will partially displace a small amount of floodplain. While one could estimate that removing the existing deck stairs and sono-tube supports will off-set the proposed floodplain displacement associated with the proposed deck stairs and sono-tube footings, the project engineer has included these new items as part of the compensatory flood storage calculations.

Patio

The stone paver patio will be re-set at existing grade, roughly in the same location as the existing paver patio; however, the proposed patio ($286\pm$ square feet) will be smaller than the existing patio ($329\pm$ square feet). Further, 5 inches of the land beneath the existing patio will be excavated and replaced with 4 inches of crushed stone and 1 inch of sand, and the joints between the stone pavers will remain open, thereby creating a semi-pervious surface for the patio (the patio is conservatively presumed to be impervious for the purposes of stormwater management calculations).

Shed

The existing shed, partially located on town land, will be relocated to the northern corner of the lot.

Driveway

The Applicant proposes to relocate the driveway off the southeastern house façade over what is currently lawn and landscaping. The driveway will remain gravel, and will measure $337\pm$ square feet, which is roughly 32% smaller than the existing gravel driveway, which measures $491\pm$ square feet.

5.

Mitigation Measures

The Applicant intends to implement erosion controls to protect adjacent properties during construction, and provide stormwater management, compensatory flood storage, and native landscape planting to improve existing site conditions. These mitigating measures are intended to meet or exceed the regulatory requirements enumerated in the *Act Regulations* and the *Bylaw Regulations*, and to promote climate resiliency in accordance with the *Bylaw Regulations*. A description of each of these mitigating measures is provided below.

5.1

Erosion and Sedimentation Control

The Applicant proposes to implement an erosion control program to protect Alewife Brook and adjacent properties from sedimentation during construction activities. The plan for the control of potential impacts to the adjacent Wetland Resource Areas is based on DEP guidelines and will be comprised of staked compost filter tubes along the Limit-of-Work line. All erosion control measures will remain in place until disturbed areas are stabilized by vegetation. The location of the proposed erosion controls and a detail are shown on the *Site Plan* (Appendix B).

5.2

Stormwater Management

The Applicant proposes to install a subsurface infiltration system to collect and infiltrate stormwater run-off from the proposed addition and a portion of the existing dwelling. The *Stormwater Report* (Appendix C) contains supporting calculations and an *Operation and Maintenance & Erosion Control Program*, and demonstrates that peak rates and volumes of stormwater run-off will decrease for the 10, 50, and 100-year statistical storm events. While the proposed addition measures $397\pm$ square feet, the stormwater system has been designed to collect and infiltrate stormwater from $854\pm$ square feet of impervious area. Stormwater run-off from the existing and proposed roof areas will connect to the infiltration system via a series of gutters, downspouts, and conduits.

5.3

Compensatory Flood Storage

The project has been designed to provide a >2:1 ratio of compensatory flood storage compared to the proposed floodplain displacement resulting from the foundation walls and sono-tube footings and deck stairs, as provided on the ‘Flood Storage Chart’ section of the *Site Plans* (Sheet 2). Specifically, the project results in the displacement of 151± cubic feet of flood storage. Proposed grading on the lot provides 318± cubic feet of flood storage, resulting in a >2:1 flood storage ratio. The backyard, side yard, and proposed driveway will be excavated to provide compensatory flood storage exceeding the requirements in the *Act* and *Bylaw*. Accordingly, the project results in significantly more flood storage compared to existing conditions, and contributes to climate resiliency in accordance with the *Bylaw Regulations*.

5.4

Native Landscape Plantings

The Applicant proposes to install native landscaping as part of the proposed project. While no formal landscape plan is proposed, the Applicant is committed to planting at least three (3) native sapling trees and twenty (20) native shrubs as part of the planting effort. These native sapling trees and shrubs will be selected from the 2014 *Recommended Native Plant Materials List* by the Arlington Conservation Commission.

6.

Regulatory Performance Standards

The *Act Regulations* and *Bylaw Regulations* provide specific performance standards for work within Riverfront Area and BLSF. The *Act Regulations* provide exceptions for certain grandfathered, minor activities within the Riverfront Area, and the *Bylaw Regulations* provide additional standards for climate resiliency. Citations of the pertinent performance standards are provided below, along with a description of how the project meets these standards.

6.1

Riverfront Area

According to the *Act Regulations* at 310 CMR 10.58 (6), Certain Activities or Areas Are Grandfathered or Exempted from Requirements for the Riverfront Area: including: (b) *Certain minor activities as identified in 310 CMR 10.02(2)(b)1.*

The *Act Regulations* at 310 CMR 10.02(2)(b)1. include the following exempt activities: e. *The conversion of lawn to uses accessory to residential structures such as decks, sheds, patios, pools, replacement of a basement bulkhead and the installation of a ramp for*

compliance with accessibility requirements, provided the activity, including material staging and stockpiling is located more than 50 feet from the mean annual high-water line within the Riverfront Area, Bank or from Bordering Vegetated Wetland, whichever is farther, and erosion and sedimentation controls are implemented during construction. The conversion of such uses accessory to existing single family houses to lawn is also allowed. (Mowing of lawns is not subject to jurisdiction under 310 CMR 10.00).

Accordingly, the proposed shed relocation, deck, and patio reconfiguration are exempt from regulation under 310 CMR 10.58.

The performance standards outlined in 310 CMR 10.58 (4), which apply to the proposed addition and driveway, include:

- (a) Protection of Other Resource Areas: Compliance with the BLSF performance standards is provided below in Section 6.2.
- (b) Protection of Rare Species: The site is not contained within Rare Species Habitat as noted above in Section 2.1;
- (c) Practicable and Substantially Equivalent Economic Alternatives: An Alternatives Analysis is provided below; and
- (d) No Significant Adverse Impact: A discussion of Significant Adverse Impacts is provided below.

6.1.1

Alternatives Analysis

The purpose of this project is to construct an addition to a single-family dwelling, and modify existing site appurtenances accordingly, including the proposed driveway, deck, shed, and patio, all of which are located within ‘previously developed’ Riverfront Area (existing lawn, deck, patio, etc.). The Applicant proposes to utilize the available space behind the dwelling and off the southeastern house façade as allowable by zoning setbacks. The configuration of existing living space and entrance/egress to the dwelling also informs the location and shape of the proposed 397± square-foot addition and the location of the proposed (smaller) driveway. The proposed alternative includes stormwater management to collect and infiltrate stormwater runoff from the proposed addition and portions of the existing dwelling, reconfigures a smaller patio to be semi-pervious, reduces the size of the driveway by roughly 32%, provides >2:1 compensatory flood storage, and includes native landscaping.

6.1.2

No Significant Adverse Impact

310 CMR 10.58 (4) (d) states:

The work, including proposed mitigating measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, s. 40...

310 CMR 10.58 (4) (d) 1. states:

Within 200 foot Riverfront Areas, the issuing authority may allow the alteration of up to 5000 square feet or 10% of the riverfront area within the lot, whichever is greater, on a lot recorded on or before October 6, 1997 or lots recorded after October 6, 1997 subject to the restrictions of 310 CMR 10.58 (4) (c) 2.b.vi., or up to 10% of the riverfront area within a lot recorded after October 6, 1997, provided that:

The property (recorded in 1932) contains $4,300 \pm$ square feet of Riverfront Area, 10% of which is $430 \pm$ square feet which is less than the 5,000 square foot threshold referenced above. Under existing conditions, the site contains $1,636 \pm$ square feet of developed Riverfront Area. The Applicant proposes $1,768 \pm$ square feet of developed Riverfront Area, resulting in a $132 \pm$ square-foot increase of developed Riverfront Area. This is largely accomplished by reducing the driveway and patio footprints.

- (a) *At a minimum, a 100-foot wide area of undisturbed vegetation is provided... If there is not a 100-foot wide area of undisturbed vegetation within the riverfront area, existing vegetative cover shall be preserved or extended to the maximum extent feasible to approximate a 100-foot wide corridor of natural vegetation...*

The entire property is developed with structures, pervious and impervious areas and lawn and located within the 200-foot Riverfront Area. The existing shed is located roughly 67 feet from the Bank-MAHW Line at its closest point, and only 23 square feet of the proposed addition is located within the 0-100' Riverfront Area. At 4,300 square feet, there is little room to expand the extent of natural vegetation. However, the Applicant proposes to install three (3) native sapling trees and twenty (20) native shrubs to improve the Riverfront Area function and value that native vegetation provides.

- (b) *Stormwater is managed according to the standards established by the Department in its Stormwater Policy.*

While stormwater management is not required by DEP for single-family dwellings, the Applicant proposes to install a subsurface infiltration system that exceeds town

requirements, and collects and infiltrates stormwater run-off from the proposed addition and portions of the existing dwelling.

- (c) *Proposed work does not impair the capacity of the riverfront area to provide important wildlife habitat functions...*

The preamble to 310 CMR 10.58 for Riverfront Area states that ‘in those portions so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated, riverfront areas are not significant to the protection of important wildlife habitat...’ This language mirrors the preamble language in 310 CMR 10.57 which includes a statement that such areas include paved areas, buildings, lawns, etc.

The Riverfront Area slated for development contains existing impervious and pervious surfaces, structures, and lawn. The proposed native landscaping will improve wildlife habitat to the extent practicable on the site.

- (d) *Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution.*

Erosion controls will be installed along the Limit-of-Work line, and a stormwater management structure is proposed to collect and infiltrate stormwater runoff from proposed roof area as well as a portion of the existing roof area.

6.2

Bordering Land Subject to Flooding

The *Act Regulations* at 310 CMR 10.57 (4) state that *work within BLSF shall conform to the following criteria:*

- (a) *Bordering Land Subject to Flooding*

- (1) *Compensatory storage shall be provided for all flood storage volume that will be lost as a result of the proposed work.*

The project will result in an increase of flood storage volume compared to existing conditions, exceeding state and local requirements, as depicted on the Flood Storage Chart section of the *Site Plan*.

- (2) *Work within BLSF...shall not restrict flows so as to cause an increase in flood stage or velocity.*

Proposed work in the floodplain will not restrict flows or cause an increase in flood storage.

- (3) *within BLSF shall not impair its capacity to provide important wildlife habitat functions.*

According to the BLSF Preamble at 310 CMR 10.57 (1) (a) 3:

Certain portions of Bordering Land Subject to Flooding are also likely to be significant to the protection of wildlife habitat. These include all areas on the ten year floodplain or within 100 feet of the bank or bordering vegetated wetland (whichever is further from the water body or waterway, so long as such area is contained within the 100 year floodplain), and all vernal pool habitat on the 100 year floodplain, except for those portions of which have been so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated (such "altered" areas include paved and graveled areas, golf courses, cemeteries, playgrounds, landfills, fairgrounds, quarries, gravel pits, buildings, lawns, gardens, roadways (including median strips, areas enclosed within highway interchanges, shoulders, and embankments), railroad tracks (including ballast and embankments), and similar areas lawfully existing on November 1, 1987 and maintained as such since that time).

The portion of land located within BLSF is “altered” and is therefore not significant to the protection of wildlife habitat.

(b) Protection of Rare Wildlife Species

- (1) *Notwithstanding the provisions of 310 CMR 10.57(4)(a) or (b), no project may be permitted which will have any adverse effect on specified wildlife habitat sites of rare vertebrate or invertebrate species.*

There are no specified wildlife habitat sites of rare vertebrate or invertebrate species located on the project site; therefore, the proposed project will have no adverse effect on any such sites.

6.3

Bylaw Performance Standards for Work Within the Floodplain

Section 23 D. of the *Bylaw Regulations* states: *The Commission may permit activity on land subject to flooding provided it shall not result in the following:*

- (1) *Flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area.*

The project has been designed to provide more flood storage than currently exists, with a >2:1 ratio of compensatory flood storage to displacement compared to existing conditions, and will not result in any increased lateral displacement of water.

- (2) *Adverse effect on public and private water supply or groundwater supply, where said area is underlain by pervious material.*

The project will not result in any increase in pollutants that could otherwise potentially result in an adverse effect on public or private water supply or groundwater supply.

- (3) *An adverse effect on the capacity of said area to prevent pollution of the groundwater, where the area is underlain by pervious material which in turn is covered by a mat of organic peat and muck.*

LEC did not observe any such conditions within or near the subject property.

6.4

Bylaw BLSF Climate Resiliency

The *Bylaw Regulations* (Section 23 D.) also state that *the applicant shall take into consideration the impacts of climate change on the activities proposed on land subject to flooding, especially in terms of the compensatory flood storage as a climate change resilience strategy. Any such activity shall provide compensatory flood storage for all flood storage volume that will be lost at each elevation. Compensatory flood storage shall be at a 2:1 ratio, minimum, for each unit volume of flood storage lost at each elevation.*

As described above in Section 5.3 of this NOI Report, the project has been designed to provide a >2:1 ratio of compensatory flood storage compared to flood storage loss, as provided on the Flood Storage Chart section of the *Site Plan*. This additional flood storage provides climate resiliency that is commensurate with the scope of the project.

6.5

General Climate Resiliency

The *Bylaw Regulations* (Section 31) state that *B. The Applicant shall, to the extent practicable and applicable as determined solely by the Commission, integrate considerations of adaptation planning into their project to promote climate change resilience so as to protect and promote resource area values into the future. These considerations are especially important in Land Subject to Flooding (floodplain) and Riverfront Area and other Resource Areas which protect the interest of Flood Control and Storm Damage Prevention, including Adjacent Upland Resource Areas. These*

Resource Areas may be directly impacted by extreme weather events expected to be more prevalent or more intense due to climate change, in surface runoff of pollutants, and in wildlife habitat due to changes in temperature. The Applicant shall consider the project's adaptation to potential climate change impacts by addressing the following:

(1) Describe project design considerations to limit storm and flood damage during extended periods of disruption and flooding as might be expected in extreme weather events. See Vegetative Wetlands Section 21, Land Subject to Flooding Section 23, and Adjacent Upland Resource Area Section 25, of these Regulations.

The Applicant proposes >2:1 ratio of compensatory flood storage to displaced floodplain, thereby exceeding the *Act* and *Bylaw* requirements. The project also reduces the size of the driveway and patio, and includes stormwater management designed to collect 854± square feet of roof run-off for a 397± square-foot addition. Accordingly, the project improves the site's climate change resiliency in accordance with the requirements in the *Bylaw Regulations*.

(2) Describe project stormwater surface runoff, which may increase due to storm surges and extreme weather events, and how this will be managed / mitigated to prevent pollution (including nutrients from fertilizers, roadway runoff, etc.) from entering the resource area with consideration of eliminating impervious surfaces as feasible. See Stormwater Management Section 33 of these Regulations.

The project includes an overdesigned stormwater management system that will collect and infiltrate stormwater run-off from the proposed addition, as well as portions of the existing dwelling. Peak rates and volumes for the 10, 50, and 100-year statistical storm events are reduced.

(3) Describe project vegetation / planting plans and other measures to improve the resiliency of the wildlife habitat of the resource area to withstand potential temperature and rainfall changes (drought and excess) due to climate change. See Vegetation Removal and Replacement Section 24 of these Regulations.

No natural vegetation will be removed for this project, and the Applicant proposes to install three (3) native sapling trees and twenty (20) native shrubs.

(4) Describe measures to protect proposed structures and minimize damage to structures due to the impacts of climate change.

The first-floor living space of the existing dwelling and the proposed addition measure >4 feet above the 1% Annual Chance Floodplain elevation, and flood vents are proposed within the proposed addition foundation per FEMA Building Code.

7.**Summary**

On behalf of the Applicant and Property Owner, Timothy Kresl, LEC is filing the enclosed NOI Application with the Arlington Conservation Commission under the *Act*, the *Act Regulations*, the *Bylaw*, and the *Bylaw Regulations* to construct an addition to a single-family dwelling, and reconfigure an existing shed, deck, patio, and driveway. Portions of the proposed activities are located within Riverfront Area, Bordering Land Subject to Flooding, and the 100-foot Buffer Zone to Bank associated with Alewife Brook

As part of this filing, the Applicant proposes to implement mitigation measures, including erosion controls, stormwater management, compensatory flood storage, and native landscaping. The project, including the proposed mitigating measures, meets or exceeds the performance standards enumerated in the *Act Regulations*, and the *Bylaw Regulations*, and the Applicant requests that the Commission issue an Order of Conditions approving the project as proposed herein.

Arlington Conservation Commission, *Town of Arlington Wetlands Protection Bylaw* (Article 8) Town of Arlington, Massachusetts.

Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways 1995. *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act, A Handbook.* 89 pp.

Massachusetts Natural Heritage and Endangered Species Program Atlas of Estimated Habitat of State-listed Rare Wetlands Wildlife, Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, Route 135, Westborough, MA 01581, www.state.ma.us/dfwele/dfw

Massachusetts Wetlands Protection Act (M.G.L. c. 131, §. 40), www.state.ma.us/dep
Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00),
www.state.ma.us/dep

National Flood Insurance Program, Federal Emergency Management Agency Flood Insurance Rate Map (Map Number 25017C0419E), Middlesex County, June 4, 2010.

New England Hydric Soils Technical Committee. 2019, 4th ed., *Field Indicators for Identifying Hydric Soils in New England*, New England Interstate Water Pollution Control Commission, Lowell, MA.

Reed, P.B. 1988. *National List of Plant Species that Occur in Wetlands: 1988 Massachusetts*. U.S. Department of the Interior, Fish and Wildlife Service. NERC-88/18.21

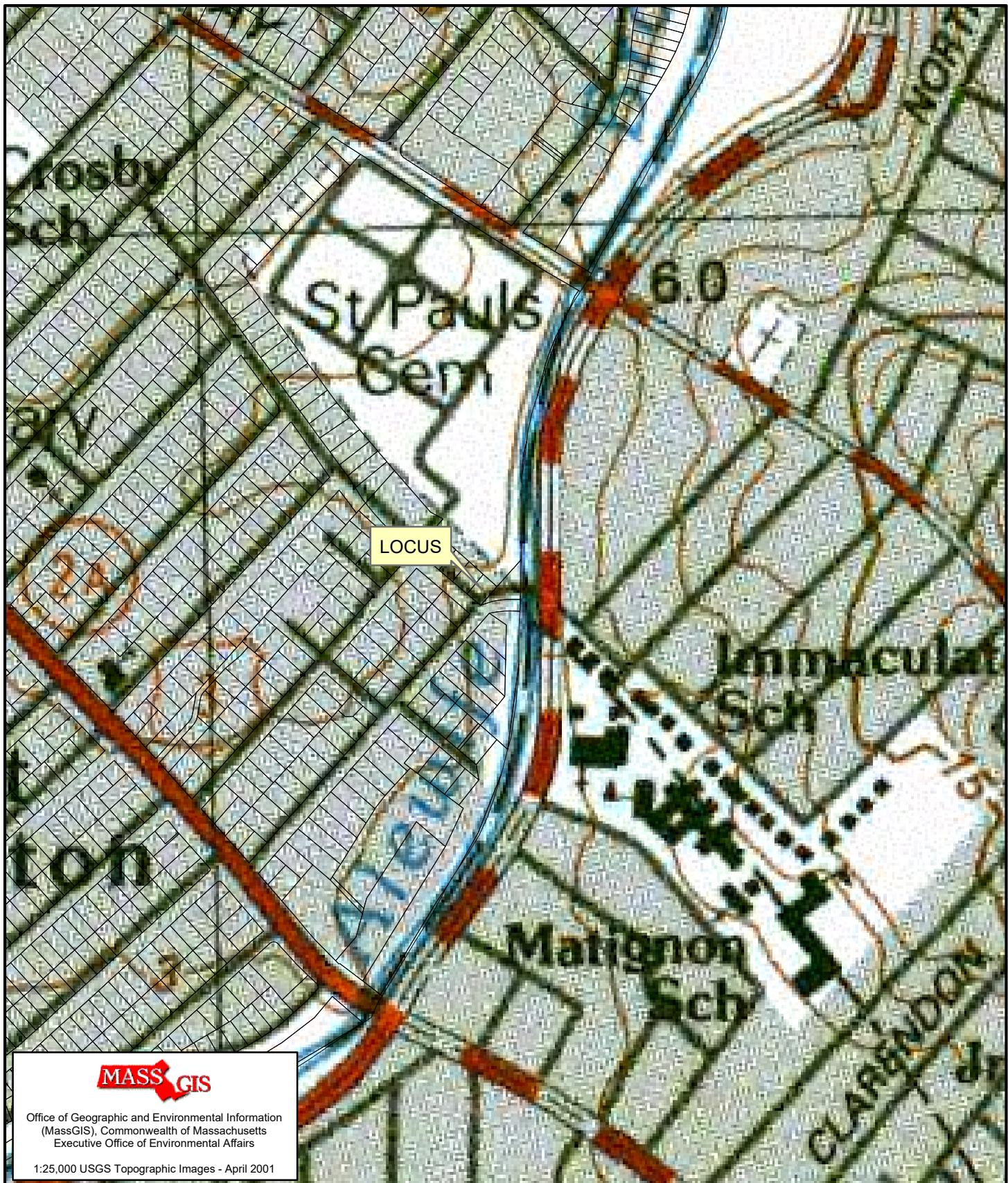
Appendix A

Locus Maps

Figure 1: USGS Topographic Quadrangle

Figure 2: FEMA Flood Insurance Rate Map

Figure 3: MassGIS Orthophoto & NHESP Estimated Habitat Map



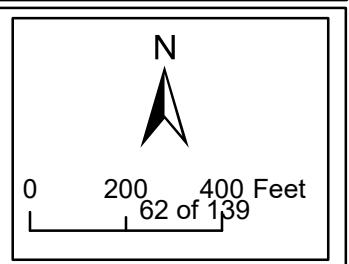
Environmental Consultants, Inc.

Wakefield, MA
781.245.2500

www.lecenvironmental.com

Figure 1: USGS Topographic Map
1 Cross Street
Arlington, MA

November 4, 2021



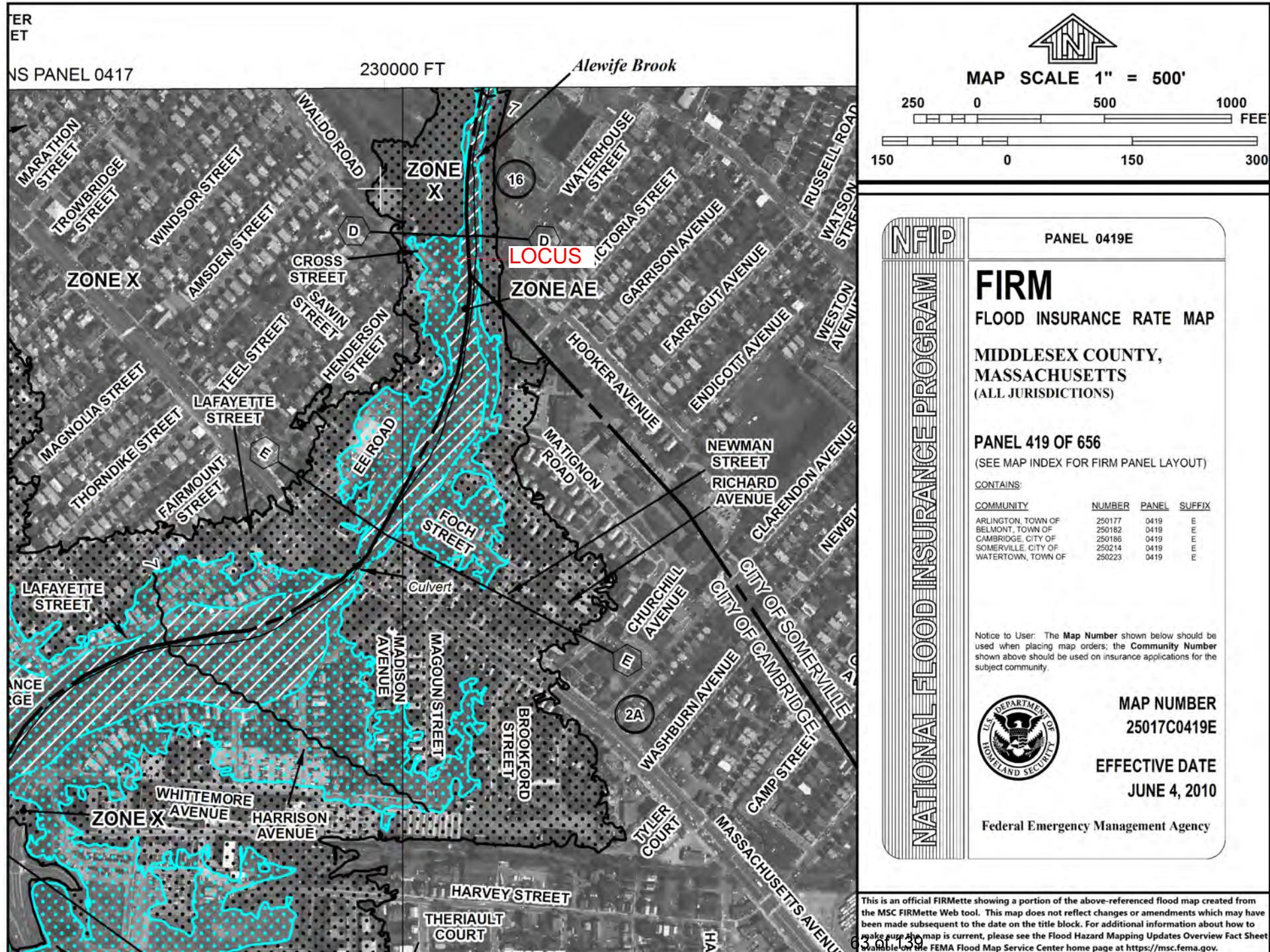


Figure 2: FEMA Flood Insurance Rate Map

LEGEND



SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



OTHER FLOOD AREAS

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

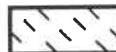


OTHER AREAS

- Areas determined to be outside the 0.2% annual chance floodplain.
- Areas in which flood hazards are undetermined, but possible.



COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988	
	Cross section line
	Transect line
87°07'45", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
2476 ^{000m} N	1000-meter Universal Transverse Mercator grid values, zone 19
600000 FT	5000-foot grid values: Massachusetts State Plane coordinate system, Mainland zone (FIPSZONE 2001), Lambert Conformal Conic projection
DX5510 X	Bench mark (see explanation in Notes to Users section of this FIRM panel)
● M1.5	River Mile

MAP REPOSITORY

Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

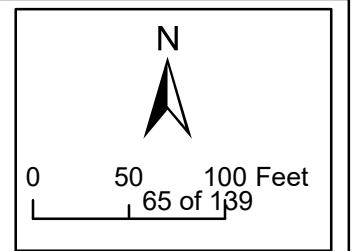
June 4, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



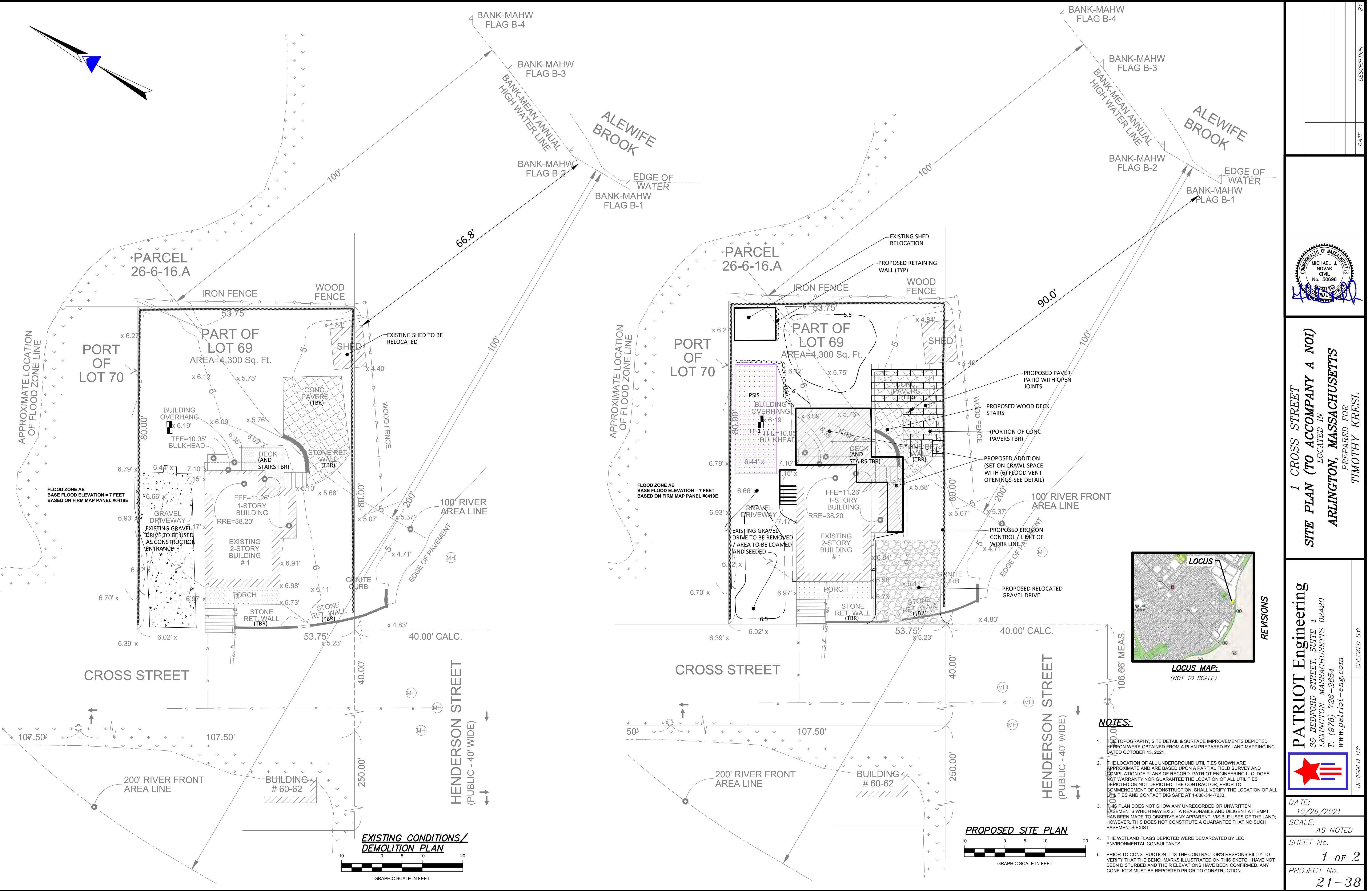
Figure 3: MassGIS Orthophoto & NHESP Map
 1 Cross Street
 Arlington, MA

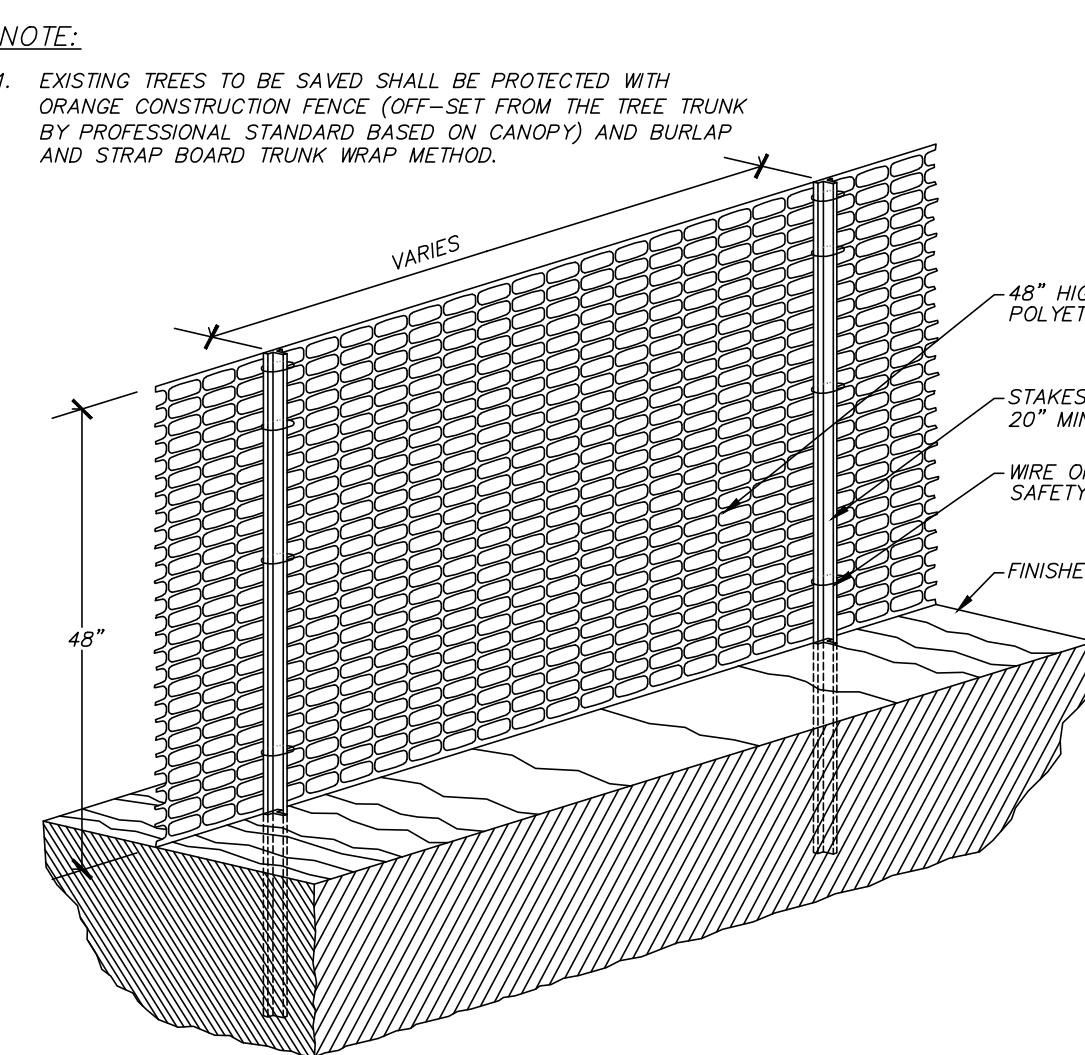
November 4, 2021



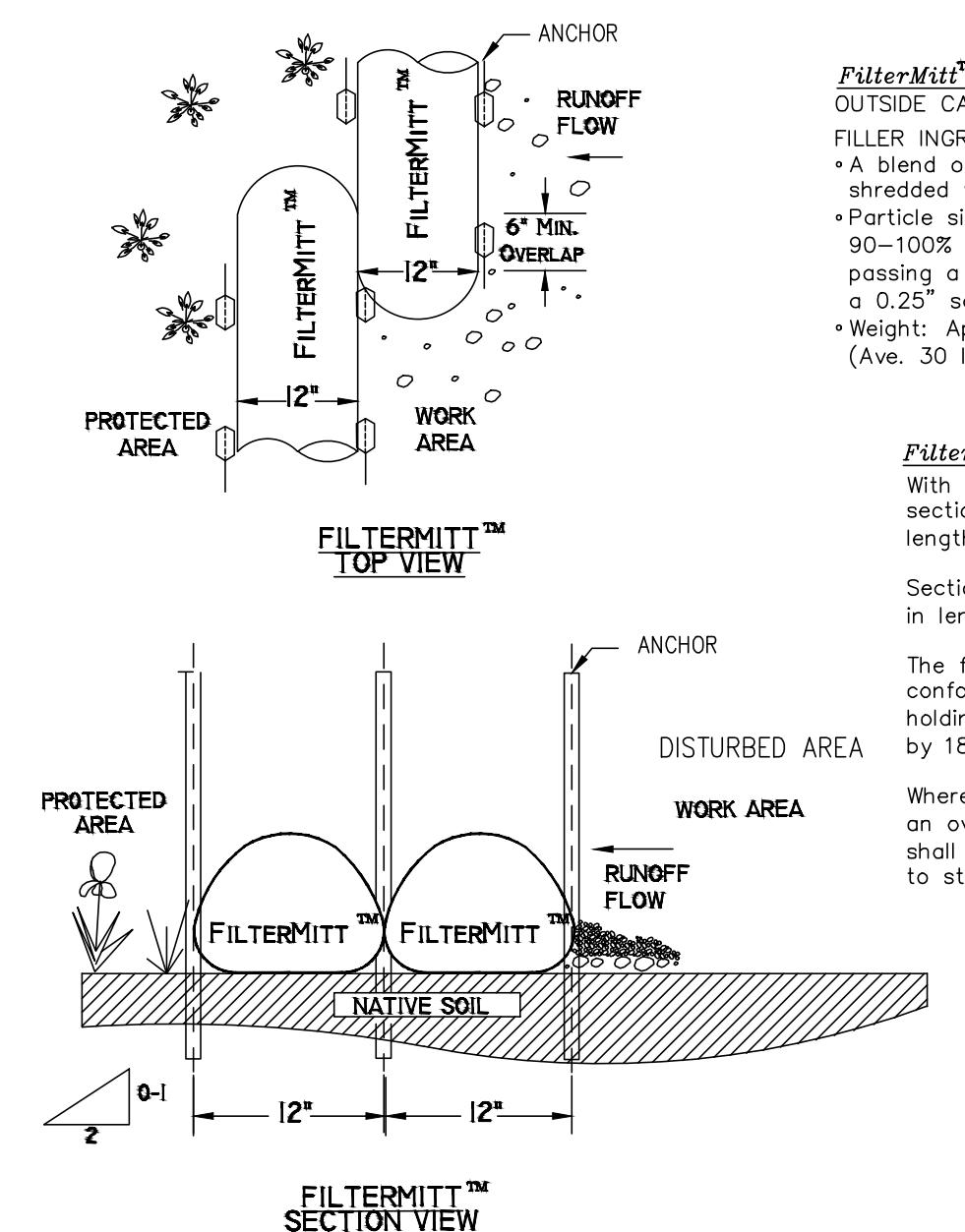
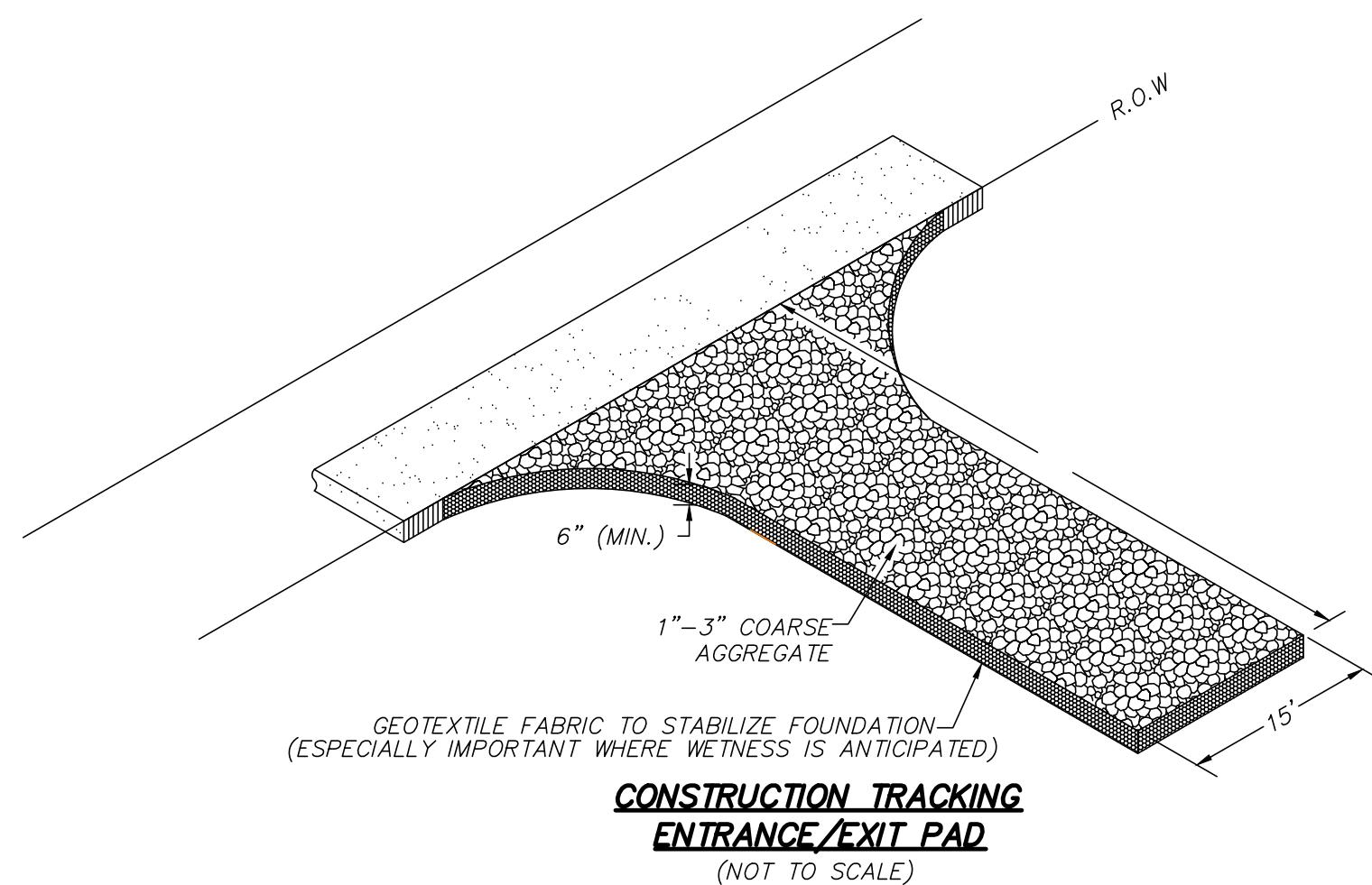
Appendix B

Site Plan (To Accompany a NOI) prepared by Patriot Engineering
dated October 26, 2021 (2 Sheets)

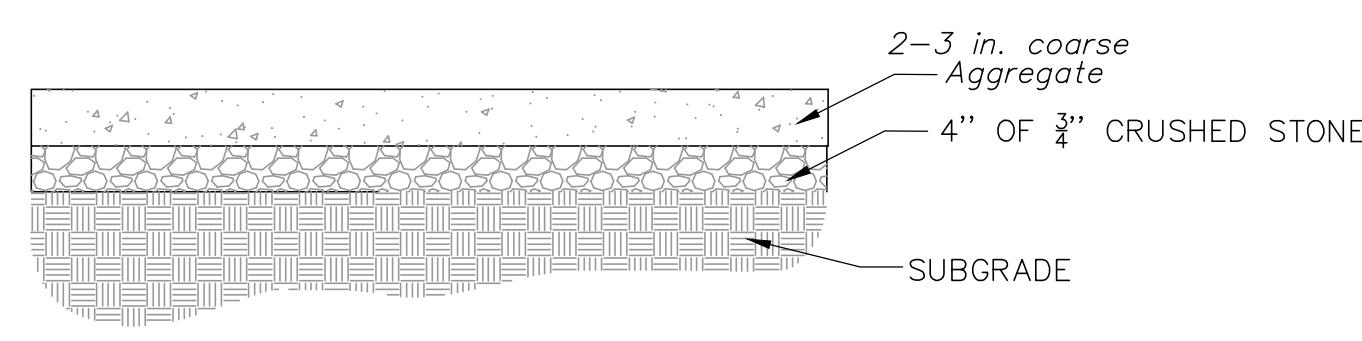




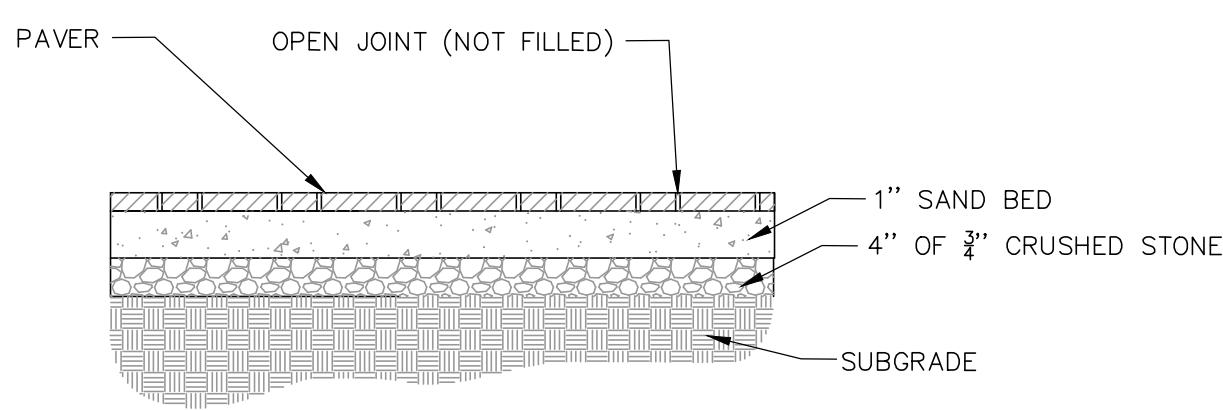
CONSTRUCTION FENCE/TREE PROTECTION
(NOT TO SCALE)



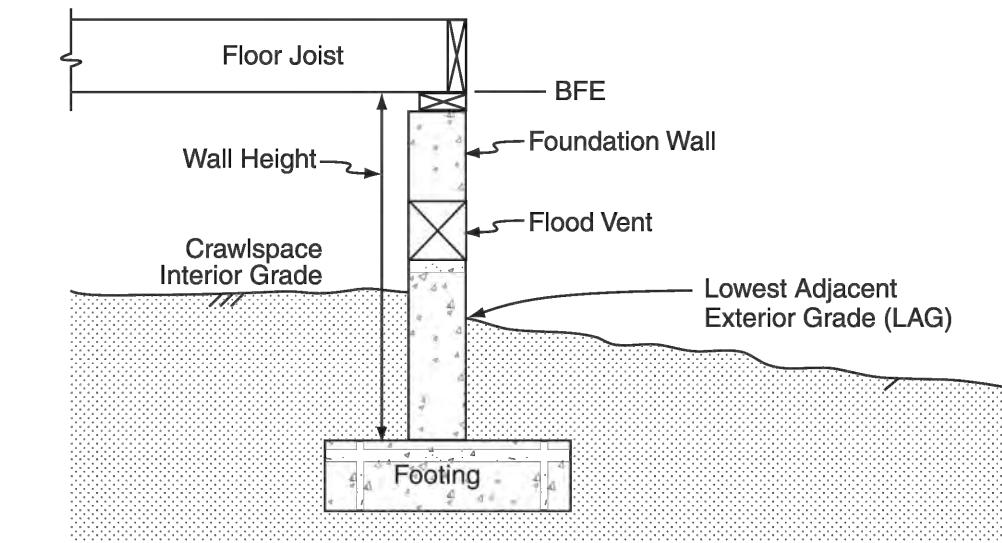
FILTERMITT™
(NOT TO SCALE)



GRAVEL DRIVE DETAIL(TYP)
(NOT TO SCALE)

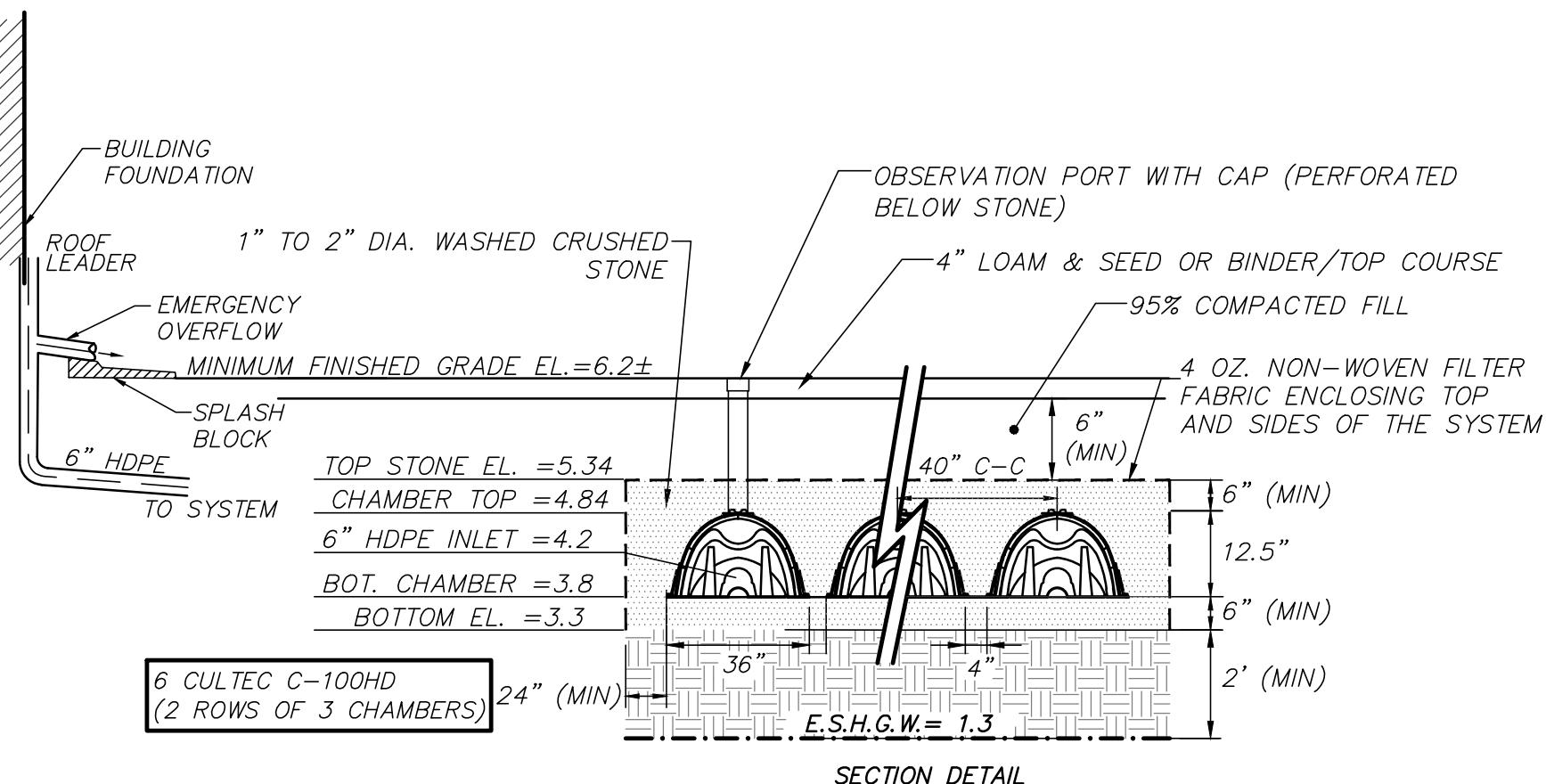


PAVER DETAIL(TYP)
(NOT TO SCALE)

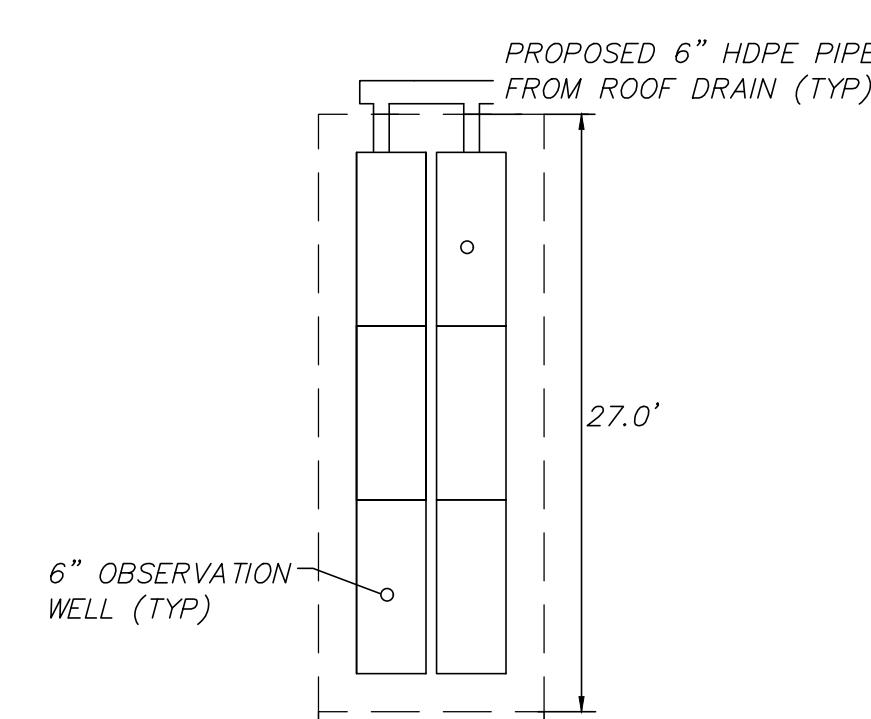


PROPOSED FLOOD VENTS - (CROSS SECTION)
(NOT TO SCALE)

1. (6) FLOOD VENTS TO BE PLACED EVENLY THROUGHOUT THE PROPOSED CRAWL SPACE.
2. AREA COVERED BY CRAWL SPACE = 424 SQUARE FEET. AREA TO BE PROVIDED BY FLOOD VENTS = 424 SQUARE INCHES.
3. FLOOD VENTS SHALL BE INSTALLED BASED ON REQUIREMENTS IN FEMA TECHNICAL BULLETIN 11



PROPOSED SUBSURFACE INFILTRATION SYSTEM -2 (PSIS-2)
(CROSS SECTION)
(NOT TO SCALE)



PROPOSED SUBSURFACE INFILTRATION SYSTEM - (PSIS)
(PLAN VIEW)
(NOT TO SCALE)

TEST PIT DATA
TEST PITS PERFORMED BY MICHAEL NOVAK (PE #50696) ON OCTOBER 7, 2021
TEST PIT-1
ELEVATION = 6.2
0'-13" A LOAM
13'-31" B SANDY LOAM
31'-59" C1 SANDY LOAM
59"-90" C2 SANDY LOAM

ESHGW @ EL= 1.28 (59")
WEEPING @ 68"

EROSION CONTROL SEQUENCE

1. LIMITS OF CONSTRUCTION ARE TO BE STAKED OUT AS THE FIRST STEP. NO CONSTRUCTION EQUIPMENT IS ALLOWED BEYOND THE LIMITS AS STAKED. THE AREA BEYOND THE LIMITS OF CONSTRUCTION IS TO REMAIN UNDISTURBED.
2. PLACE FILTERMITT AT LIMITS OF CONSTRUCTION AS DIRECTED ON THE SITE PLANS. SEE APPROPRIATE DETAILS SHOWING HOW TO PROPERLY INSTALL FILTERMITT.
3. AREAS OF DISTURBANCE TO BE KEPT TO A MINIMUM. THE AMOUNT OF TIME AN AREA IS LEFT UNSTABILIZED WILL BE KEPT TO A MINIMUM.
4. STABILIZE ALL DISTURBED AREAS WITH A MINIMUM OF 4" LOAM AND SEED.
5. LEAVE TEMPORARY EROSION CONTROL IN PLACE UNTIL ALL DISTURBED AREAS ARE REVEGETATED.
6. IF THE SITE IS TO BE LEFT OPEN AFTER OCTOBER 15, ALL DISTURBED AREAS ARE TO BE TEMPORARILY STABILIZED BY COVERING WITH MULCH HAY.
7. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION & ARE TO BE PERIODICALLY INSPECTED AND REPAIRED OR REPLACED AS NECESSARY THROUGHOUT THE PROJECT CONSTRUCTION.

FLOOD STORAGE CHART

FILLED FLOOD STRAGE			COMPENSATORY FLOOD STORAGE		
ELEV (FT)	AREA (SF)	VOLUME (CF)	ELEV (FT)	AREA (SF)	VOLUME (CF)
4 to 5	1	1	4 to 5	16	3
5 to 6	45	45	5 to 6	340	102
6 to 7	60	105	6 to 7	427	213

PATRIOT Engineering
35 BIDDEFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 736-2654
www.patriot-eng.com

DESIGNED BY: M. CAPACHETTI CHECKED BY: M. NOVAK

DATE: 10/26/2021
SCALE: AS NOTED
SHEET No. 2 of 2
PROJECT No. 21-38

REVISIONS	DATE	DESCRIPTION	BY

COMMUNAL OF MASSACHUSETTS
MICHAEL J.
NOVAK
CIVIL
No. 50696
REGISTERED
HAROLD KRESL
HAROLD KRESL

Appendix C

Stormwater Analysis and Calculations prepared by Patriot Engineering

Dated October 26, 2021

**STORMWATER ANALYSIS AND CALCULATIONS
FOR
1 CROSS STREET
ARLINGTON, MASSACHUSETTS**

**PREPARED FOR:
TIMOTHY KRESL
1 CROSS STREET
ARLINGTON, MA 02476**

**PREPARED BY:
PATRIOT Engineering, LLC
35 Bedford Street, Suite 4
Lexington, Massachusetts 02420
(978)726-2654**



DATE: October 26, 2021





VIA: EMAIL/VIEWPOINT

October 26, 2021

Ms. Susan Chapnick and
Members of the Conservation Commission Town
of Arlington, Town Hall
730 Mass Ave. Annex
Arlington, MA 02476

**Re: 1 Cross Street
Arlington, Massachusetts**

Dear Ms. Chapnick & Members of the Commission:

Patriot Engineering LLC (Patriot) is pleased to submit this letter and accompanying documentation in support of a Notice of Intent application for the project at 1 Cross Street. The proposed site improvements will involve the construction of an addition to the side and rear of the existing dwelling along with an associated wooden deck. An existing shed and gravel driveway will be relocated along with a reconfiguration of an existing patio.

The existing topography for the subject parcel results in water runoff to one (1) location; the eastern property line (toward the delineated wetland and existing bank). This location has been chosen as the design point for the stormwater analysis. The proposed site improvements will mimic existing drainage patterns. Through the addition of a subsurface infiltration system designed to capture and infiltrate stormwater runoff from the roof areas of the proposed addition and a portion of the existing dwelling; the stormwater runoff rates and volumes will not increase in the proposed conditions. Stormwater runoff from the disturbed areas will follow existing drainage patterns.

The HydroCAD analysis below shows that with the proposed mitigation efforts for the site improvements will not result in an increase in peak rate of stormwater surface runoff during the 10, 50, and 100-year design storms.

Design Point	<u>PRE</u>	<u>POST</u>
STORM	RATE (cfs)	VOLUME (cf)
10 Year	0.11	402
50 Year	0.28	922
100 Year	0.43	1,369

STORM	RATE (cfs)	VOLUME (cf)	RATE (cfs)	VOLUME (cf)
10 Year	0.11	402	0.06	237
50 Year	0.28	922	0.18	600
100 Year	0.43	1,369	0.28	925

Accompanying this letter is:

- A “Site Plan of Land” dated October 26, 2021 ;
- “Stormwater Analysis and Calculations for 1 Cross Street” dated October 26, 2021;
- A copy of the NRCS Soil Map showing the soil classification of that located on the locus property;
- An “Operation & Maintenance Program” dated October 26, 2021.

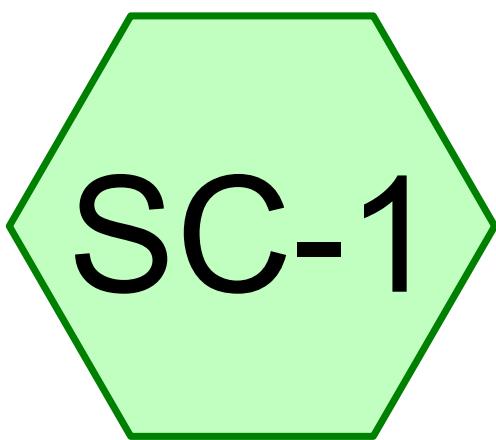
We anticipate this information meets the requirements of the Town of Arlington Conservation Commission. Should you have any questions or require any further detail, please feel welcome to call me at (978) 726-2654.

Sincerely,

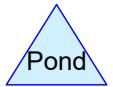
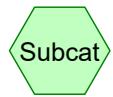
PATRIOT Engineering LLC,



Michael J Novak, P.E.
Patriot Engineering LLC
35 Bedford Street, Suite 4
Lexington, MA 02420



SC-1



Routing Diagram for 1 CROSS_PRE
Prepared by Patriot Engineering, Printed 10/30/2021
HydroCAD® 10.10-4b s/n 11576 © 2020 HydroCAD Software Solutions LLC

Summary for Subcatchment SC-1: SC-1

Runoff = 0.11 cfs @ 12.11 hrs, Volume= 402 cf, Depth> 1.12"

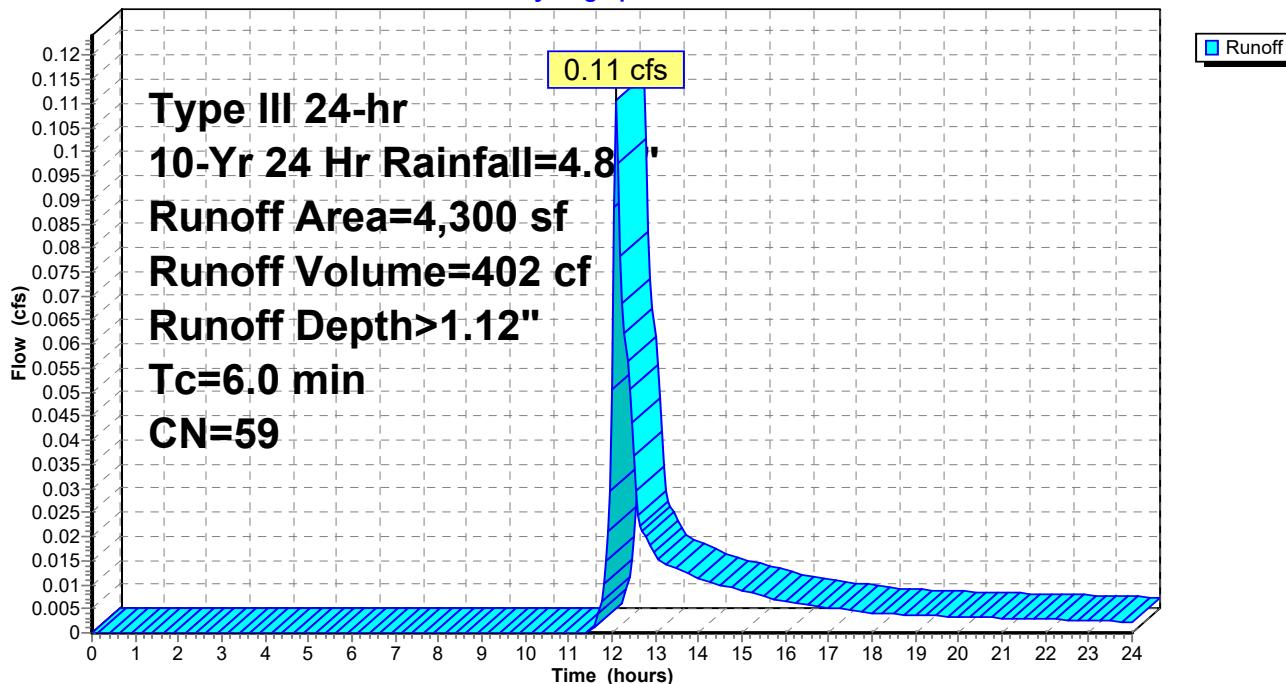
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
2,828	39	>75% Grass cover, Good, HSG A
*	652	98 ROOF
490	96	Gravel surface, HSG B
*	330	PATIO
4,300	59	Weighted Average
3,318		77.16% Pervious Area
982		22.84% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry, Min. Engineering Standard				

Subcatchment SC-1: SC-1

Hydrograph



Summary for Subcatchment SC-1: SC-1

Runoff = 0.28 cfs @ 12.10 hrs, Volume= 922 cf, Depth> 2.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

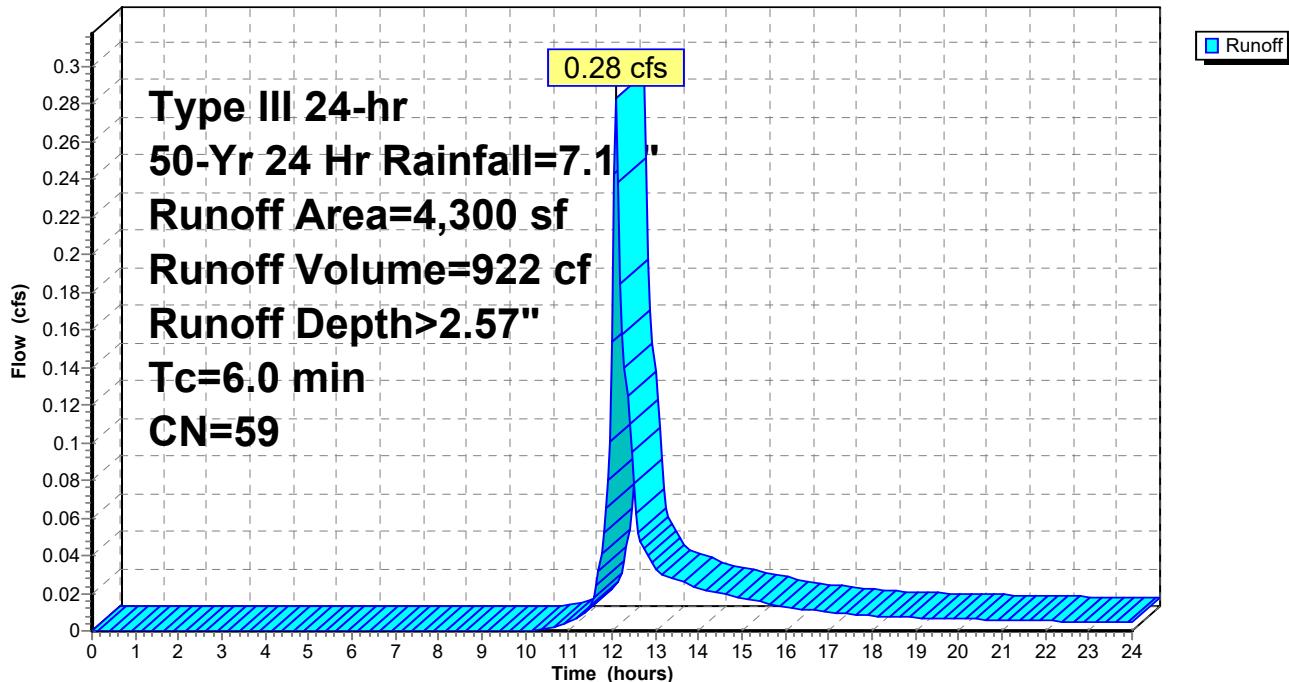
Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

Area (sf)	CN	Description
2,828	39	>75% Grass cover, Good, HSG A
*	652	98 ROOF
490	96	Gravel surface, HSG B
*	330	PATIO
4,300	59	Weighted Average
3,318		77.16% Pervious Area
982		22.84% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry, Min. Engineering Standard				

Subcatchment SC-1: SC-1

Hydrograph



Summary for Subcatchment SC-1: SC-1

Runoff = 0.43 cfs @ 12.10 hrs, Volume= 1,369 cf, Depth> 3.82"

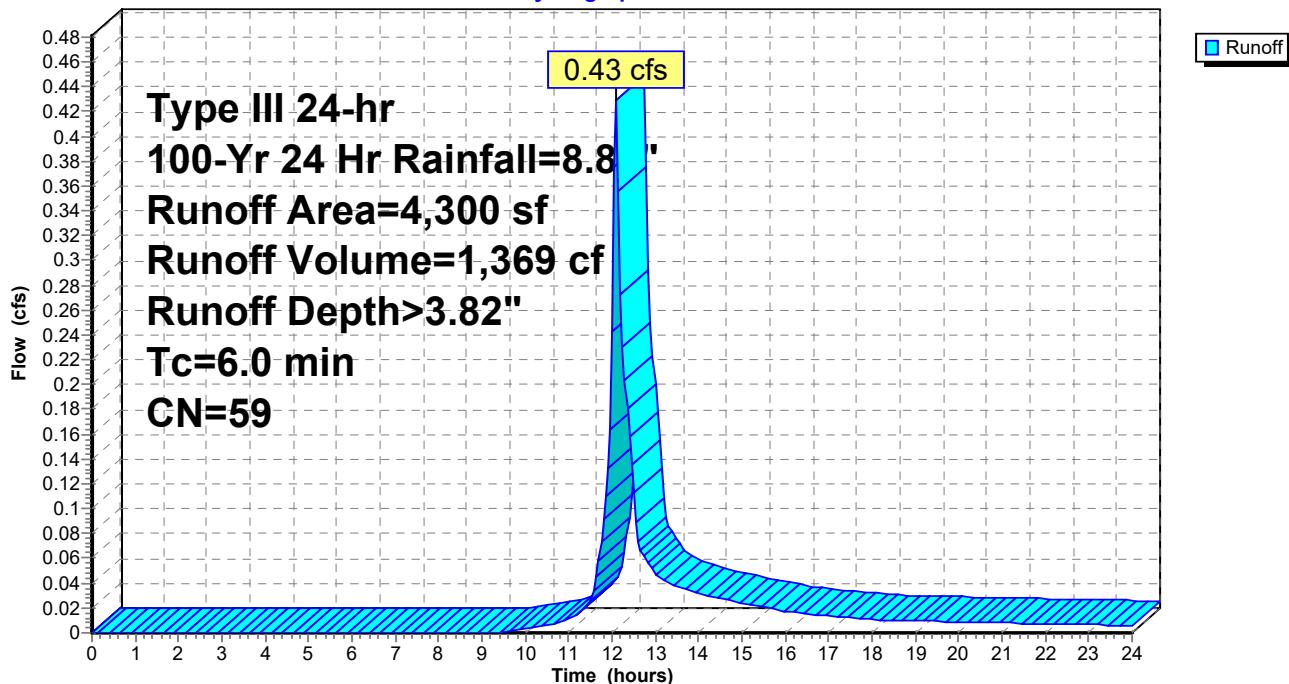
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
2,828	39	>75% Grass cover, Good, HSG A
*	652	98 ROOF
490	96	Gravel surface, HSG B
*	330	PATIO
4,300	59	Weighted Average
3,318		77.16% Pervious Area
982		22.84% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry, Min. Engineering Standard				

Subcatchment SC-1: SC-1

Hydrograph

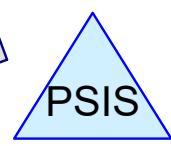




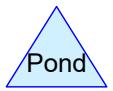
SC-100



ROOF RUNOFF



PSIS



Routing Diagram for 1 CROSS_POST
Prepared by Patriot Engineering, Printed 10/30/2021
HydroCAD® 10.10-4b s/n 11576 © 2020 HydroCAD Software Solutions LLC

1 CROSS_POST

Prepared by Patriot Engineering

HydroCAD® 10.10-4b s/n 11576 © 2020 HydroCAD Software Solutions LLC

Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Printed 10/30/2021

Page 2

Summary for Pond PSIS: PSIS

Inflow Area = 854 sf, 100.00% Impervious, Inflow Depth > 4.56" for 10-Yr 24 Hr event

Inflow = 0.09 cfs @ 12.09 hrs, Volume= 325 cf

Outflow = 0.01 cfs @ 12.96 hrs, Volume= 324 cf, Atten= 91%, Lag= 52.3 min

Discarded = 0.01 cfs @ 12.96 hrs, Volume= 324 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 4.25' @ 12.96 hrs Surf.Area= 279 sf Storage= 119 cf

Plug-Flow detention time= 110.4 min calculated for 324 cf (100% of inflow)

Center-of-Mass det. time= 109.6 min (857.9 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	3.40'	194 cf	10.33'W x 27.00'L x 2.04'H Field A 570 cf Overall - 86 cf Embedded = 484 cf x 40.0% Voids
#2A	3.90'	86 cf	Cultec C-100HD x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
279 cf Total Available Storage			

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	3.40'	1.020 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.01 cfs @ 12.96 hrs HW=4.25' (Free Discharge)↑
1=Exfiltration (Exfiltration Controls 0.01 cfs)

Pond PSIS: PSIS - Chamber Wizard Field A**Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)**

Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf

Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.86 sf x 2 rows

36.0" Wide + 4.0" Spacing = 40.0" C-C Row Spacing

3 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 23.00' Row Length +24.0" End Stone x 2 = 27.00' Base Length

2 Rows x 36.0" Wide + 4.0" Spacing x 1 + 24.0" Side Stone x 2 = 10.33' Base Width

6.0" Stone Base + 12.5" Chamber Height + 6.0" Stone Cover = 2.04' Field Height

6 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 2 Rows = 85.6 cf Chamber Storage

569.6 cf Field - 85.6 cf Chambers = 484.0 cf Stone x 40.0% Voids = 193.6 cf Stone Storage

Chamber Storage + Stone Storage = 279.2 cf = 0.006 af

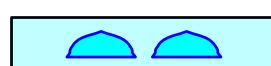
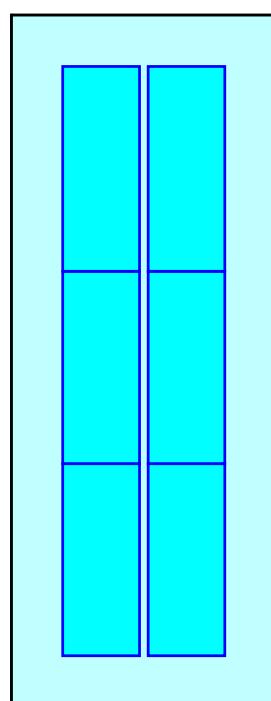
Overall Storage Efficiency = 49.0%

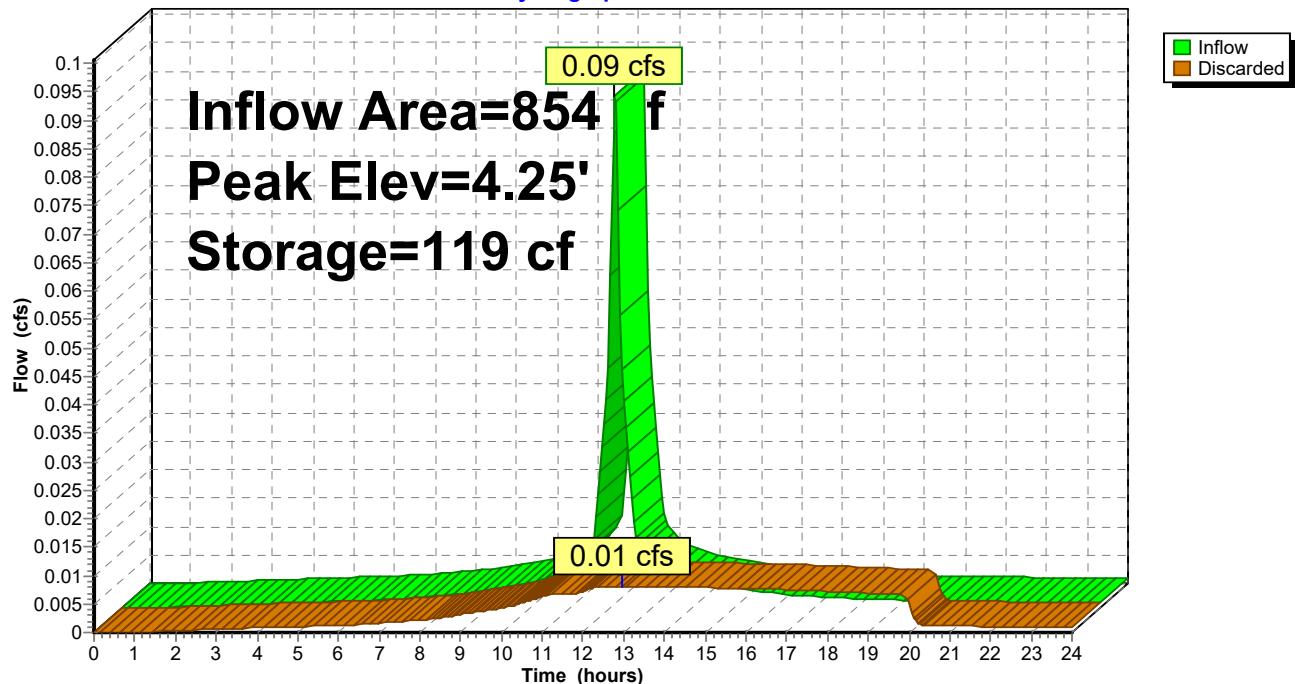
Overall System Size = 27.00' x 10.33' x 2.04'

6 Chambers

21.1 cy Field

17.9 cy Stone



Pond PSIS: PSIS**Hydrograph**

Summary for Subcatchment ROOF: ROOF RUNOFF

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 325 cf, Depth> 4.56"

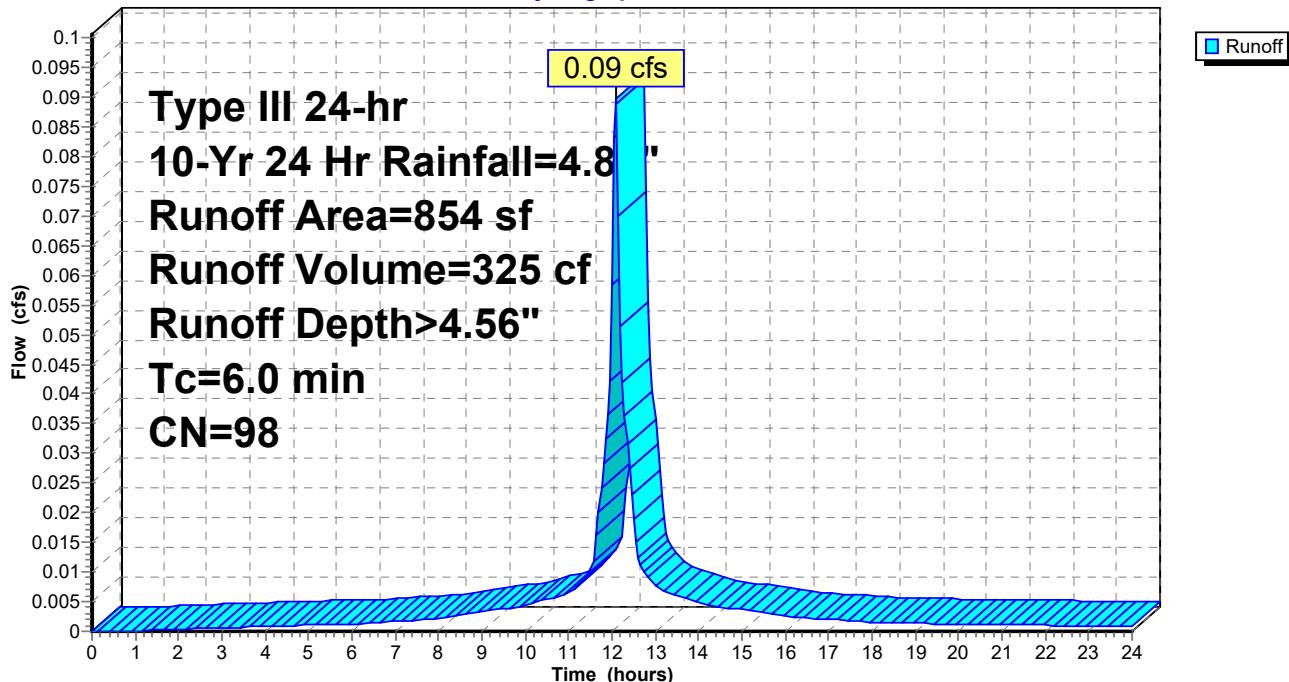
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
854	98	Roofs, HSG A
854		100.00% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry,				

Subcatchment ROOF: ROOF RUNOFF

Hydrograph



Summary for Subcatchment SC-100: SC-100

Runoff = 0.06 cfs @ 12.12 hrs, Volume= 237 cf, Depth> 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

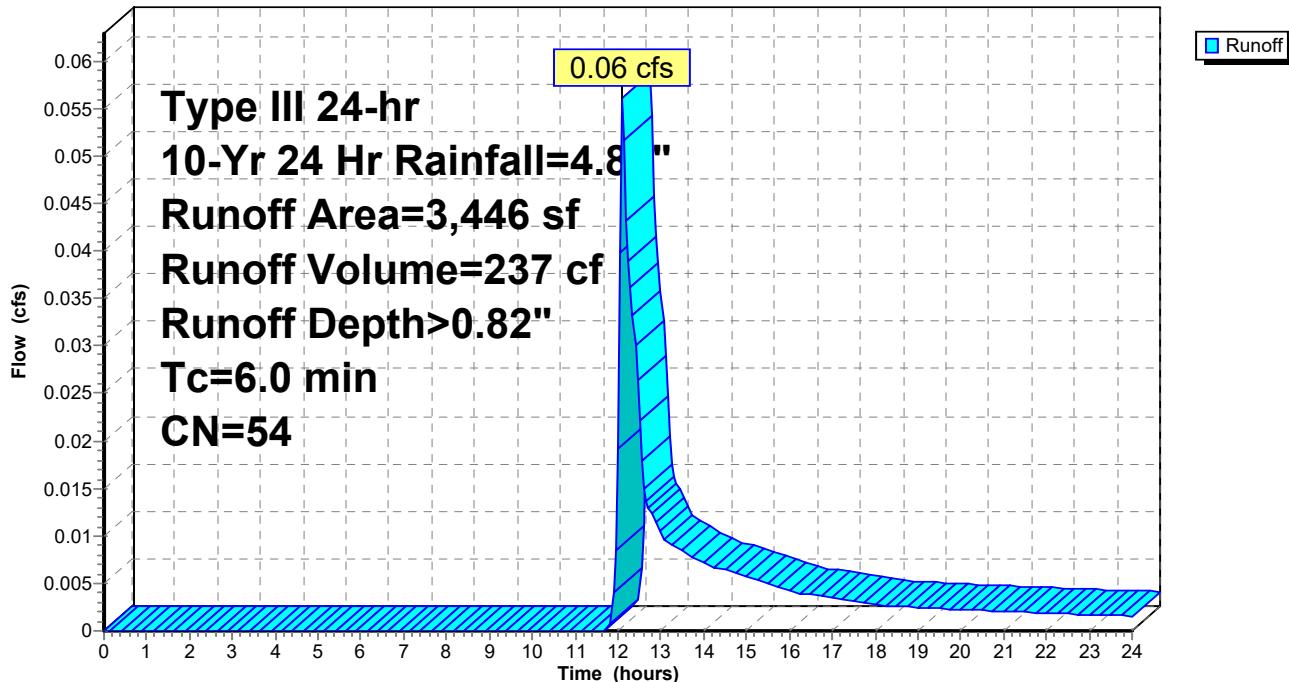
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
2,539	39	>75% Grass cover, Good, HSG A
*	284	98 ROOF
337	96	Gravel surface, HSG B
*	286	PATIO
3,446	54	Weighted Average
2,876		83.46% Pervious Area
570		16.54% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry, Min. Engineering Standard				

Subcatchment SC-100: SC-100

Hydrograph



1 CROSS_POST

Prepared by Patriot Engineering

HydroCAD® 10.10-4b s/n 11576 © 2020 HydroCAD Software Solutions LLC

Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

Printed 10/30/2021

Page 7

Summary for Pond PSIS: PSIS

Inflow Area = 854 sf, 100.00% Impervious, Inflow Depth > 6.86" for 50-Yr 24 Hr event

Inflow = 0.13 cfs @ 12.09 hrs, Volume= 488 cf

Outflow = 0.01 cfs @ 13.45 hrs, Volume= 478 cf, Atten= 93%, Lag= 82.1 min

Discarded = 0.01 cfs @ 13.45 hrs, Volume= 478 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 4.78' @ 13.45 hrs Surf.Area= 279 sf Storage= 204 cf

Plug-Flow detention time= 193.7 min calculated for 478 cf (98% of inflow)

Center-of-Mass det. time= 180.2 min (922.5 - 742.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	3.40'	194 cf	10.33'W x 27.00'L x 2.04'H Field A 570 cf Overall - 86 cf Embedded = 484 cf x 40.0% Voids
#2A	3.90'	86 cf	Cultec C-100HD x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
279 cf Total Available Storage			

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	3.40'	1.020 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.01 cfs @ 13.45 hrs HW=4.78' (Free Discharge)↑
1=Exfiltration (Exfiltration Controls 0.01 cfs)

Pond PSIS: PSIS - Chamber Wizard Field A**Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)**

Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf

Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.86 sf x 2 rows

36.0" Wide + 4.0" Spacing = 40.0" C-C Row Spacing

3 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 23.00' Row Length +24.0" End Stone x 2 = 27.00' Base Length

2 Rows x 36.0" Wide + 4.0" Spacing x 1 + 24.0" Side Stone x 2 = 10.33' Base Width

6.0" Stone Base + 12.5" Chamber Height + 6.0" Stone Cover = 2.04' Field Height

6 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 2 Rows = 85.6 cf Chamber Storage

569.6 cf Field - 85.6 cf Chambers = 484.0 cf Stone x 40.0% Voids = 193.6 cf Stone Storage

Chamber Storage + Stone Storage = 279.2 cf = 0.006 af

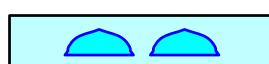
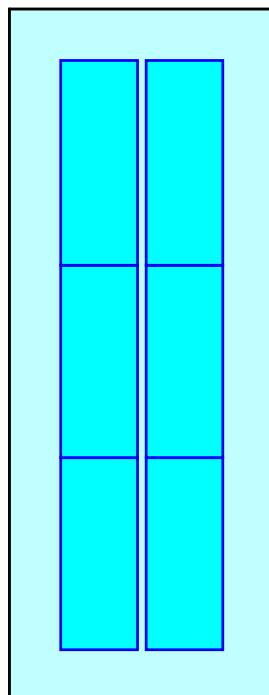
Overall Storage Efficiency = 49.0%

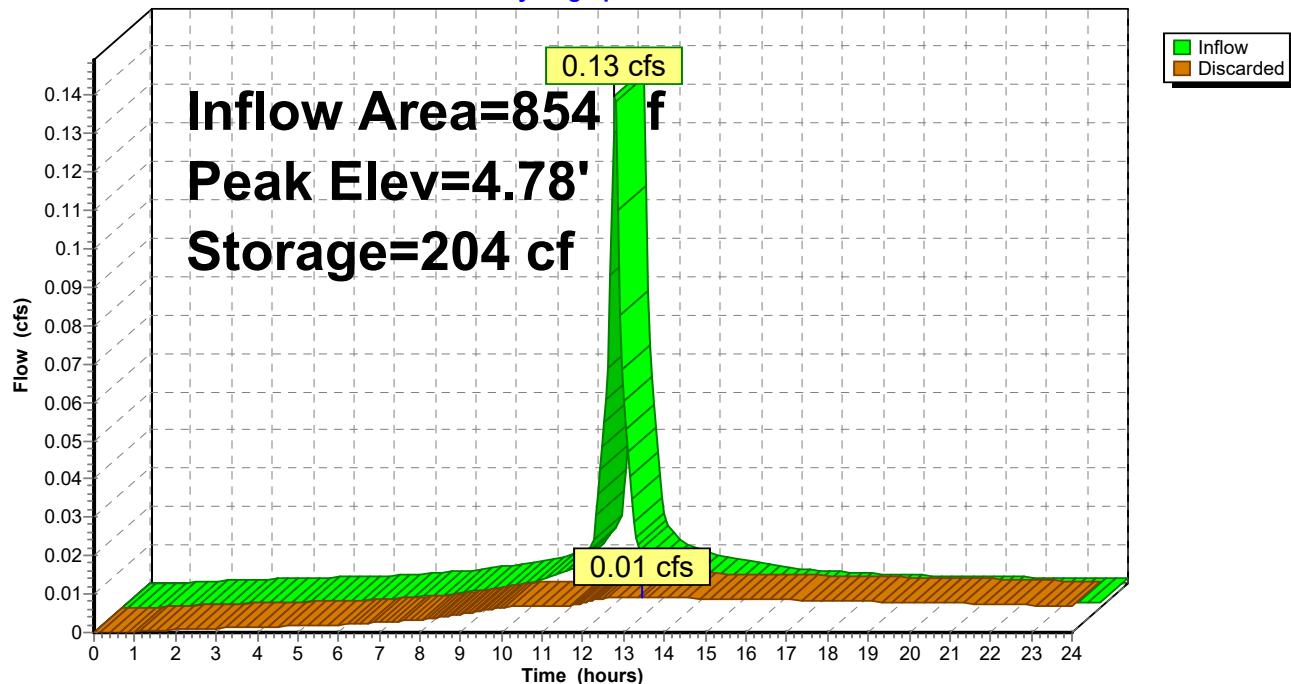
Overall System Size = 27.00' x 10.33' x 2.04'

6 Chambers

21.1 cy Field

17.9 cy Stone



Pond PSIS: PSIS**Hydrograph**

Summary for Subcatchment ROOF: ROOF RUNOFF

Runoff = 0.13 cfs @ 12.09 hrs, Volume= 488 cf, Depth> 6.86"

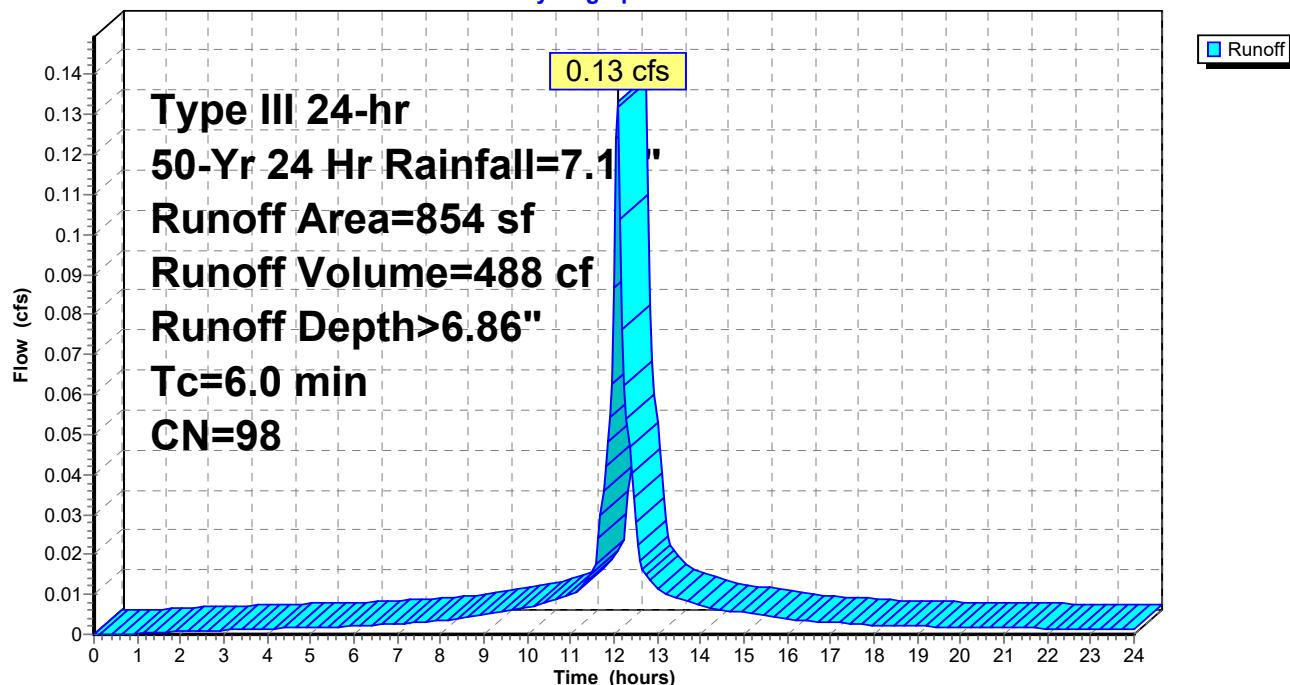
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

Area (sf)	CN	Description
854	98	Roofs, HSG A
854		100.00% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry,				

Subcatchment ROOF: ROOF RUNOFF

Hydrograph



Summary for Subcatchment SC-100: SC-100

Runoff = 0.18 cfs @ 12.10 hrs, Volume= 600 cf, Depth> 2.09"

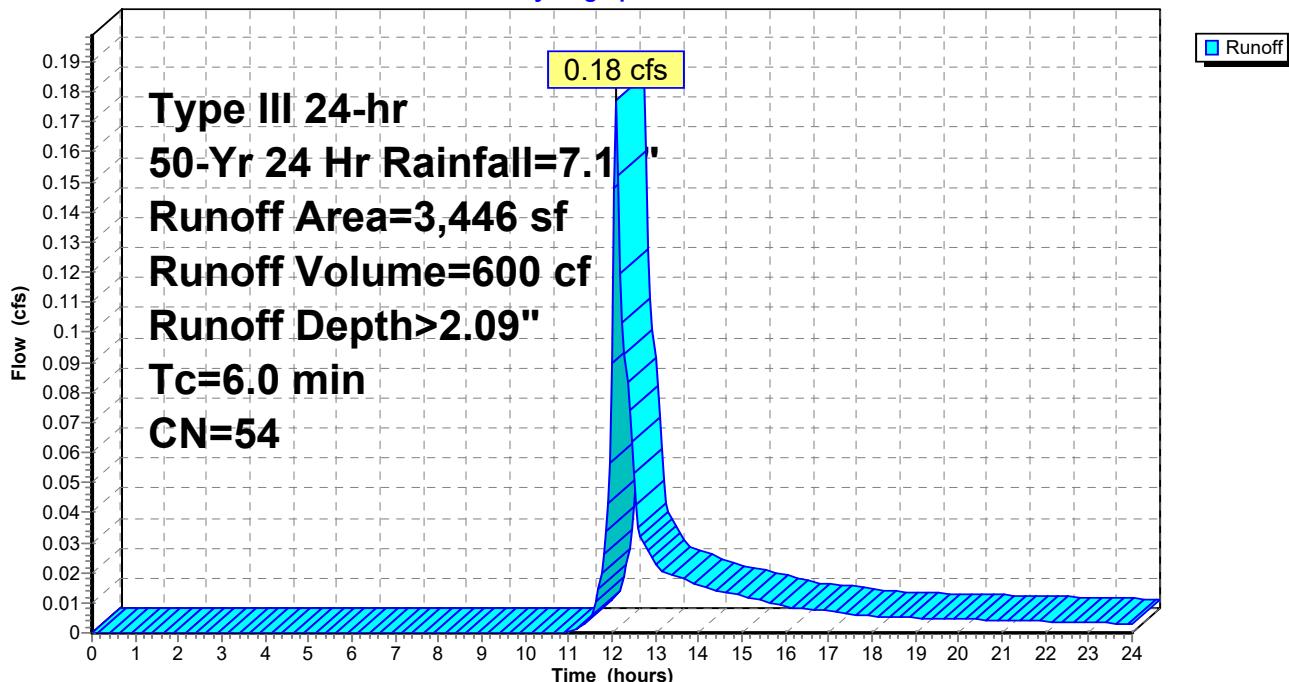
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

Area (sf)	CN	Description
2,539	39	>75% Grass cover, Good, HSG A
*	284	98 ROOF
337	96	Gravel surface, HSG B
*	286	PATIO
3,446	54	Weighted Average
2,876		83.46% Pervious Area
570		16.54% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry, Min. Engineering Standard				

Subcatchment SC-100: SC-100

Hydrograph



1 CROSS_POST

Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Prepared by Patriot Engineering

Printed 10/30/2021

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Page 12

Summary for Pond PSIS: PSIS

Inflow Area = 854 sf, 100.00% Impervious, Inflow Depth > 8.55" for 100-Yr 24 Hr event

Inflow = 0.17 cfs @ 12.09 hrs, Volume= 609 cf

Outflow = 0.01 cfs @ 13.72 hrs, Volume= 535 cf, Atten= 94%, Lag= 97.8 min

Discarded = 0.01 cfs @ 13.72 hrs, Volume= 535 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 5.38' @ 13.72 hrs Surf.Area= 279 sf Storage= 273 cf

Plug-Flow detention time= 228.4 min calculated for 534 cf (88% of inflow)

Center-of-Mass det. time= 171.9 min (911.5 - 739.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	3.40'	194 cf	10.33'W x 27.00'L x 2.04'H Field A 570 cf Overall - 86 cf Embedded = 484 cf x 40.0% Voids
#2A	3.90'	86 cf	Cultec C-100HD x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
279 cf Total Available Storage			

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	3.40'	1.020 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.01 cfs @ 13.72 hrs HW=5.38' (Free Discharge)↑
1=Exfiltration (Exfiltration Controls 0.01 cfs)

Pond PSIS: PSIS - Chamber Wizard Field A**Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)**

Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf

Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap

Row Length Adjustment= +0.50' x 1.86 sf x 2 rows

36.0" Wide + 4.0" Spacing = 40.0" C-C Row Spacing

3 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 23.00' Row Length +24.0" End Stone x 2 = 27.00' Base Length

2 Rows x 36.0" Wide + 4.0" Spacing x 1 + 24.0" Side Stone x 2 = 10.33' Base Width

6.0" Stone Base + 12.5" Chamber Height + 6.0" Stone Cover = 2.04' Field Height

6 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 2 Rows = 85.6 cf Chamber Storage

569.6 cf Field - 85.6 cf Chambers = 484.0 cf Stone x 40.0% Voids = 193.6 cf Stone Storage

Chamber Storage + Stone Storage = 279.2 cf = 0.006 af

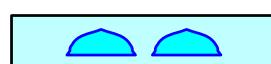
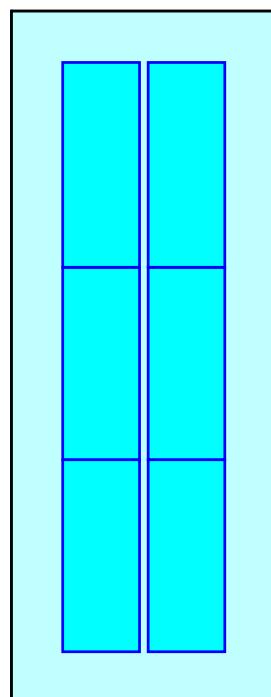
Overall Storage Efficiency = 49.0%

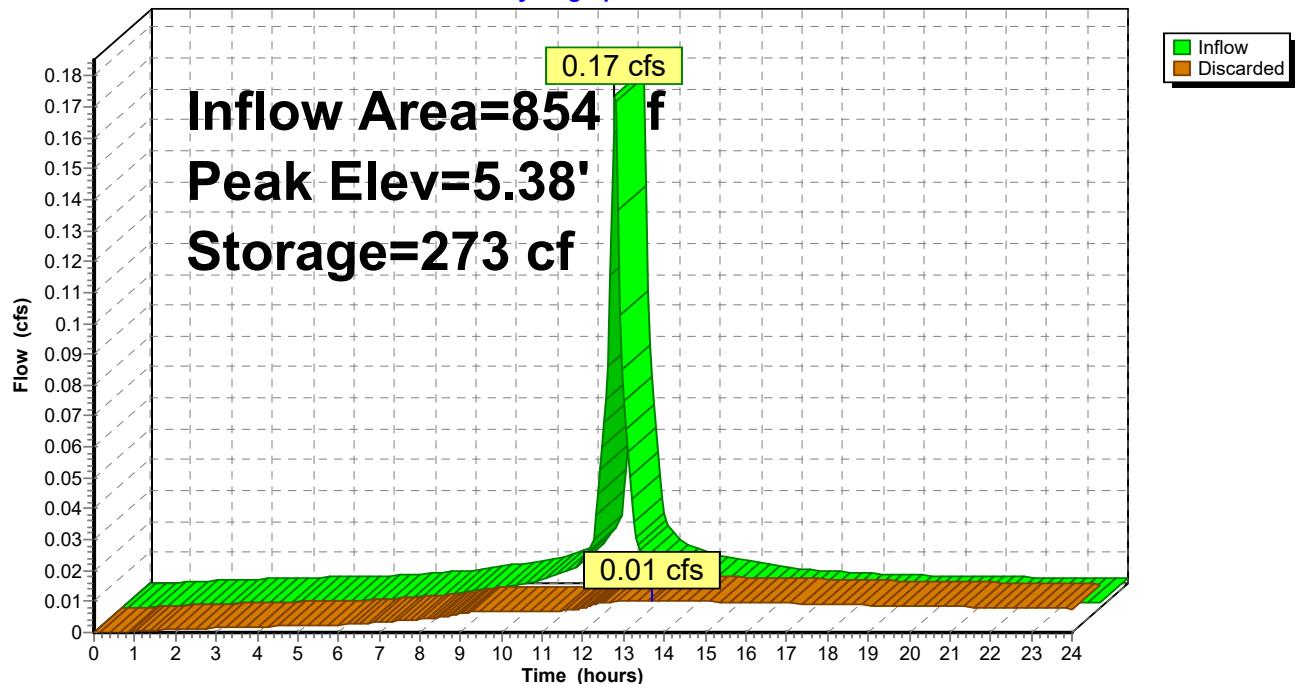
Overall System Size = 27.00' x 10.33' x 2.04'

6 Chambers

21.1 cy Field

17.9 cy Stone



Pond PSIS: PSIS**Hydrograph**

Summary for Subcatchment ROOF: ROOF RUNOFF

Runoff = 0.17 cfs @ 12.09 hrs, Volume= 609 cf, Depth> 8.55"

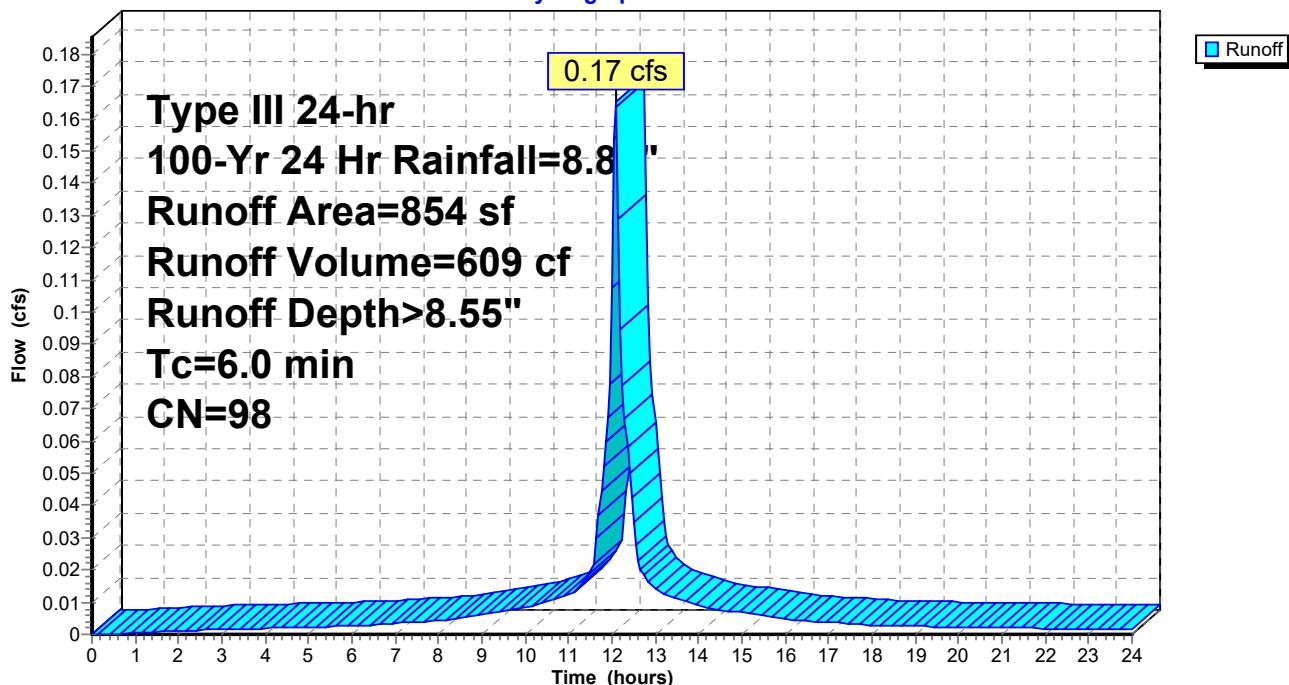
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
854	98	Roofs, HSG A
854		100.00% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry,				

Subcatchment ROOF: ROOF RUNOFF

Hydrograph



Summary for Subcatchment SC-100: SC-100

Runoff = 0.28 cfs @ 12.10 hrs, Volume= 925 cf, Depth> 3.22"

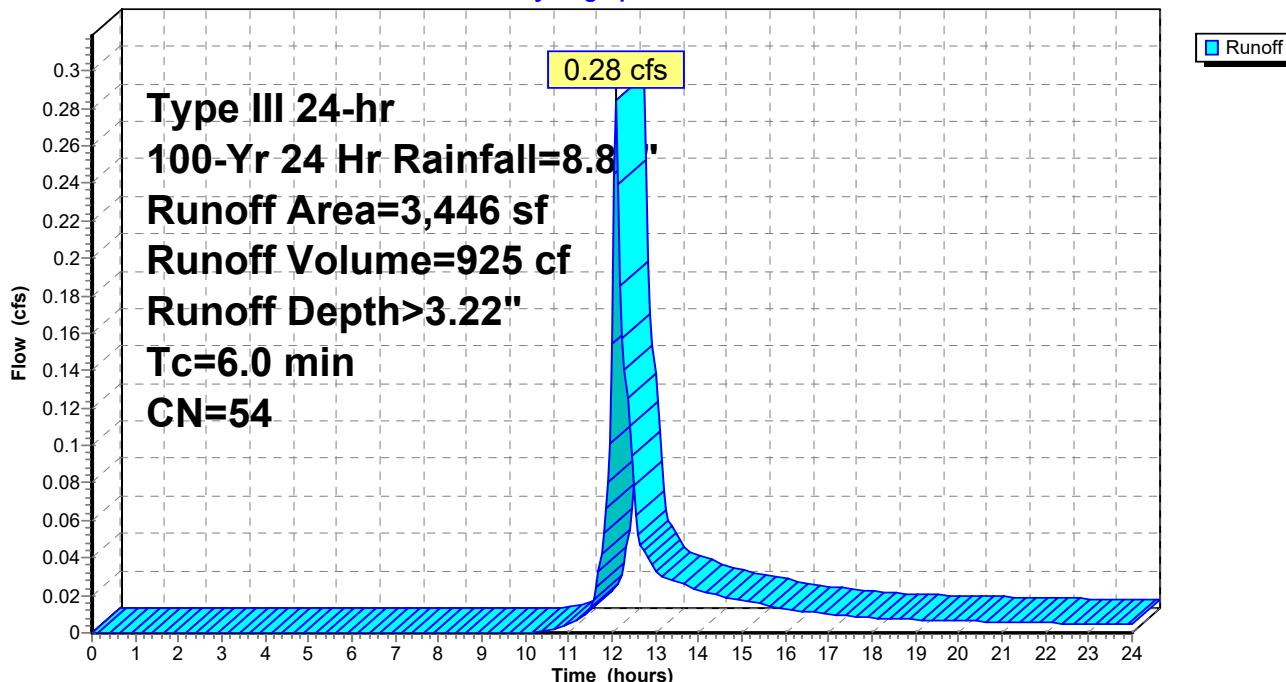
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
2,539	39	>75% Grass cover, Good, HSG A
*	284	98 ROOF
337	96	Gravel surface, HSG B
*	286	PATIO
3,446	54	Weighted Average
2,876		83.46% Pervious Area
570		16.54% Impervious Area

Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.0	Direct Entry, Min. Engineering Standard				

Subcatchment SC-100: SC-100

Hydrograph



**OPERATION AND MAINTENANCE &
EROSION CONTROL PROGRAM
FOR
1 CROSS STREET
ARLINGTON, MASSACHUSETTS**

PREPARED FOR:

**TIMOTHY KRESL
1 CROSS STREET
ARLINGTON, MA 02476**

PREPARED BY:

**PATRIOT Engineering, LLC
35 Bedford Street, Suite 4
Lexington, Massachusetts 02420
(978)726-2654**

DATE: October 26, 2021



Project Name: 1 Cross Street
Arlington, MA

Applicants: Tim Kresl
1 Cross Street
Arlington MA 02421

Party Responsible for Maintenance During Construction: Contractor

Party Responsible for Maintenance After Construction: Property Owner

Erosion and Sedimentation Control Measures during Construction Activities

Filtermitt

Filtermitt will be installed along the down gradient limit of work as depicted on the Site Construction Plan. The Filtermitt will be installed prior to the commencement of any work on-site. An additional supply of Filtermitt shall be on-site to replace and/or repair Filtermitt that is disturbed. The lines of Filtermitt shall be inspected and maintained on a weekly basis during construction. No construction activities are to occur beyond the Filtermitt at any time. Sediment shall be removed once the volume reaches $\frac{1}{4}$ to $\frac{1}{2}$ the height of the Filtermitt.

Surface Stabilization

The surface of all disturbed areas shall be stabilized during and after construction. Disturbed areas remaining idle for more than 14 days shall be stabilized. Temporary measures shall be taken during construction to prevent erosion and siltation. No construction sediment shall be allowed to enter any infiltration system or formal drainage system. All disturbed slopes will be stabilized with a permanent vegetative cover. Some or all of the following measures will be utilized on this project as conditions may warrant.

- a. Temporary Seeding
- b. Temporary Mulching
- c. Permanent Seeding
- d. Placement of Sod
- e. Hydroseeding
- f. Placement of Hay
- g. Placement of Jute Netting Dust shall be controlled at the site.

Tree Protection

Existing trees to be saved shall be protected with orange construction fence (offset from the tree trunk by professional standard based on canopy).

Subsurface Infiltration Facilities

Construction activity above and around the proposed location of the subsurface infiltration facility shall be limited to prevent compaction of the existing soil. Care shall be taken to redirect stormwater runoff from this area to prevent ponding. Installation of this system shall occur under dry weather conditions and system shall be backfilled immediately to prohibit the introduction of fines or other material that would compromise the functionality of this system.

Silt Sacks

Silt Sacks shall be installed within the basins. The performance of the basins shall be checked after every major storm event during construction, in the event of clogging within the Silt Sack, it shall be removed and replaced with a clean Silt Sack. Stormwater quality unit shall be checked bi-weekly.

Removal of Sediment and Erosion Controls

At the completion of construction activities and after receiving approval from the Town of Arlington, all physical sediment and erosion controls shall be removed from the site.

Long-Term Inspection and Maintenance Measures after Construction

Erosion Control

Eroded sediments can adversely affect the performance of the stormwater management system. Eroding or barren areas should be immediately re-vegetated.

Subsurface Infiltration Facility

The infiltration system inspections should include inspections following the first several rainfall events or first few months after construction, after all major storms (3.2" inches of rain over a 24-hour period or greater), and on regular bi-annual scheduled dates, to ascertain whether captured runoff drains within 72 hours following the event. Ponded water inside the system (as visible from the observation well) after several dry days often indicates that the bottom of the system is clogged. If the water does not drain, then a qualified professional should be retained to determine the cause of apparent infiltration failure and recommend corrective action. Such corrective action should be immediately implemented by the homeowner. If depth of sediment is observed to be greater than 3" then the system should be cleaned. The homeowner shall contact a sewer and drain cleaning company to flood the system via pump truck so the water is forced back to the upstream cleanout where sediment can be vacuumed out.

Debris and Litter Removal

Trash may collect in the BMP's, potentially causing clogging of the facilities. All debris and litter shall be removed when necessary, and after each storm event. Sediment and debris collected from vacuuming and/or sweeping should be disposed of at a permitted waste disposal facility. Avoid disposing of this material on site, where it could be washed into the proposed subsurface infiltration systems.

STORMWATER MANAGEMENT
CONSTRUCTION PHASE

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

PROJECT LOCATION: 1 Cross Street

WEATHER: _____

<i>Inspection Date</i>	<i>Inspector</i>	<i>Area Inspected</i>	<i>Required Inspection Frequency if BMP</i>	<i>Comments</i>	<i>Recommendation</i>	<i>Follow-up Inspection Required (yes/no)</i>
		<i>Filtermitt</i>	<i>Weekly and After Major Storm Events</i>			
		<i>Subsurface Infiltration System</i>	<i>Weekly and After Major Storm Events</i>			
		<i>Siltsack</i>	<i>Weekly and After Major Storm Events</i>			

-
- (1) Refer to the Massachusetts Stormwater Handbook, Volume Two: Stormwater Technical Handbook (February 2008) for recommendations regarding frequency for inspection and maintenance of specific BMP's.
 - (2) Inspections to be conducted by a qualified professional such as an environmental scientist or civil engineer.

Limited or no use of sodium chloride salts, fertilizers or pesticides recommended.

Other notes: (Include deviations from: Con. Comm. Order of Conditions, PB Approval, Construction Sequence and Approved Plan)
Stormwater Control Manager: _____

STORMWATER MANAGEMENT
AFTER CONSTRUCTION

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

PROJECT LOCATION: 1 Cross Street

WEATHER: _____

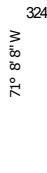
<i>Inspection Date</i>	<i>Inspector</i>	<i>Area Inspected</i>	<i>Required Inspection Frequency if BMP</i>	<i>Comments</i>	<i>Recommendation</i>	<i>Follow-up Inspection Required (yes/no)</i>
		<i>Subsurface Infiltration System</i>	<i>Bi-annually and After Major Storm Events</i>			

-
- (3) Refer to the Massachusetts Stormwater Handbook, Volume Two: Stormwater Technical Handbook (February 2008) for recommendations regarding frequency for inspection and maintenance of specific BMP's.
(4) Inspections to be conducted by a qualified professional such as an environmental scientist or civil engineer.

Limited or no use of sodium chloride salts, fertilizers or pesticides recommended.

Other notes: (Include deviations from: Con. Comm. Order of Conditions, PB Approval, Construction Sequence and Approved Plan)
Stormwater Control Manager: _____

Soil Map—Middlesex County, Massachusetts



Map Scale: 1:548 if printed on A landscape (11" x 8.5") sheet.

0 5 10 20 30 Meters

0 25 50 100 150 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

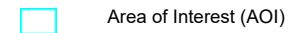
99 of 139



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

10/27/2021
Page 1 of 3

MAP LEGEND**Area of Interest (AOI)**

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Lines



Soil Map Unit Points

Special Point Features

Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



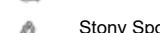
Sinkhole



Slide or Slip



Sodic Spot

Spoil Area

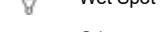
Stony Spot



Very Stony Spot



Wet Spot



Other

Special Line Features

Streams and Canals

Transportation

Rails



Interstate Highways



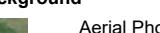
US Routes



Major Roads



Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts

Survey Area Data: Version 21, Sep 2, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 13, 2020—Sep 15, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	1.1	100.0%
Totals for Area of Interest		1.1	100.0%



Middlesex County, Massachusetts

626B—Merrimac-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyr9

Elevation: 0 to 820 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 250 days

Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 45 percent

Urban land: 40 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Outwash plains, outwash terraces, moraines, eskers, kames

Landform position (two-dimensional): Backslope, footslope, summit, shoulder

Landform position (three-dimensional): Side slope, crest, riser, tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam

Bw1 - 10 to 22 inches: fine sandy loam

Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand

2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 2 percent

Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)



Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, crest, head slope, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Outwash terraces, dunes, outwash plains, deltas
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex

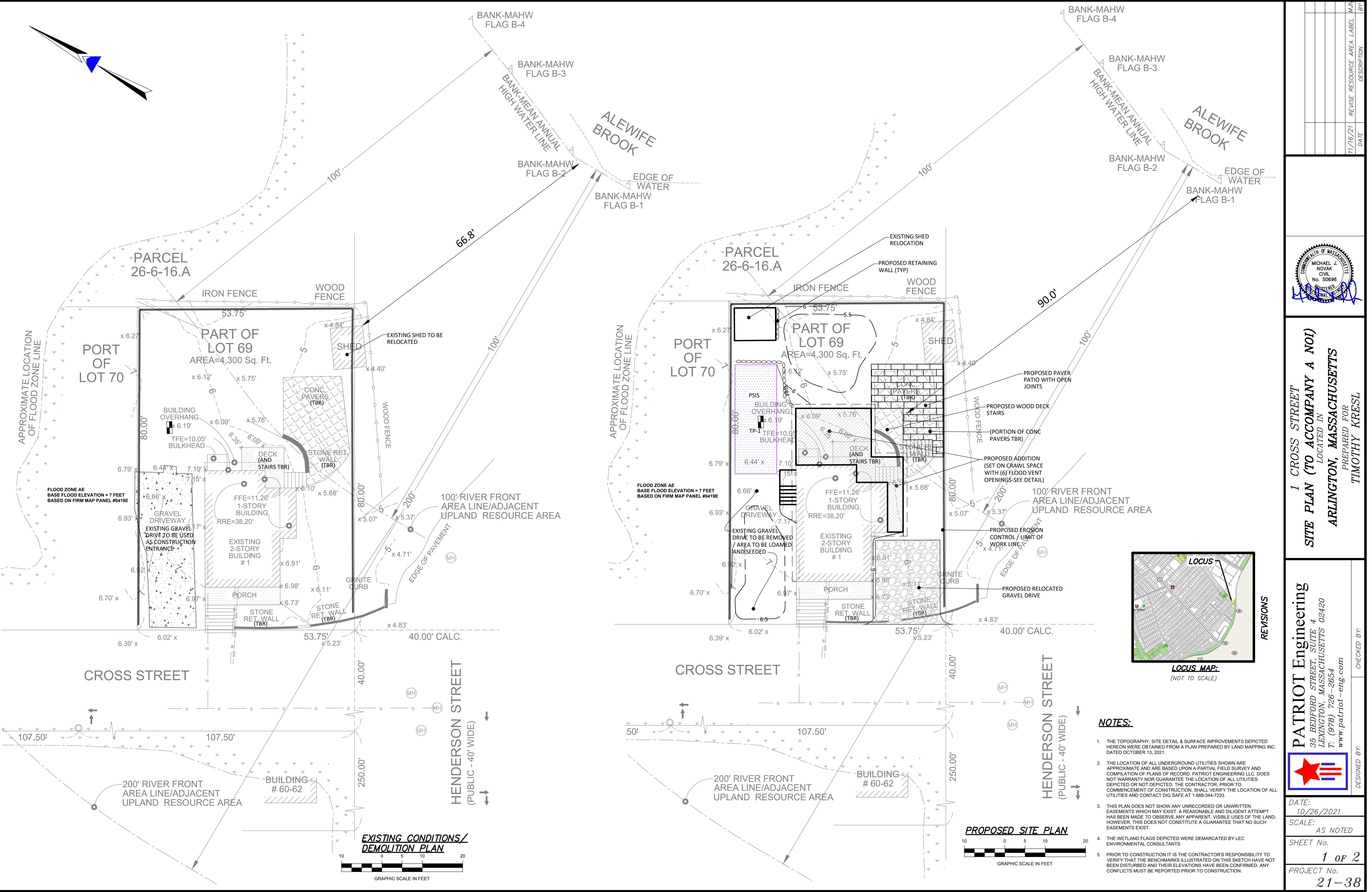


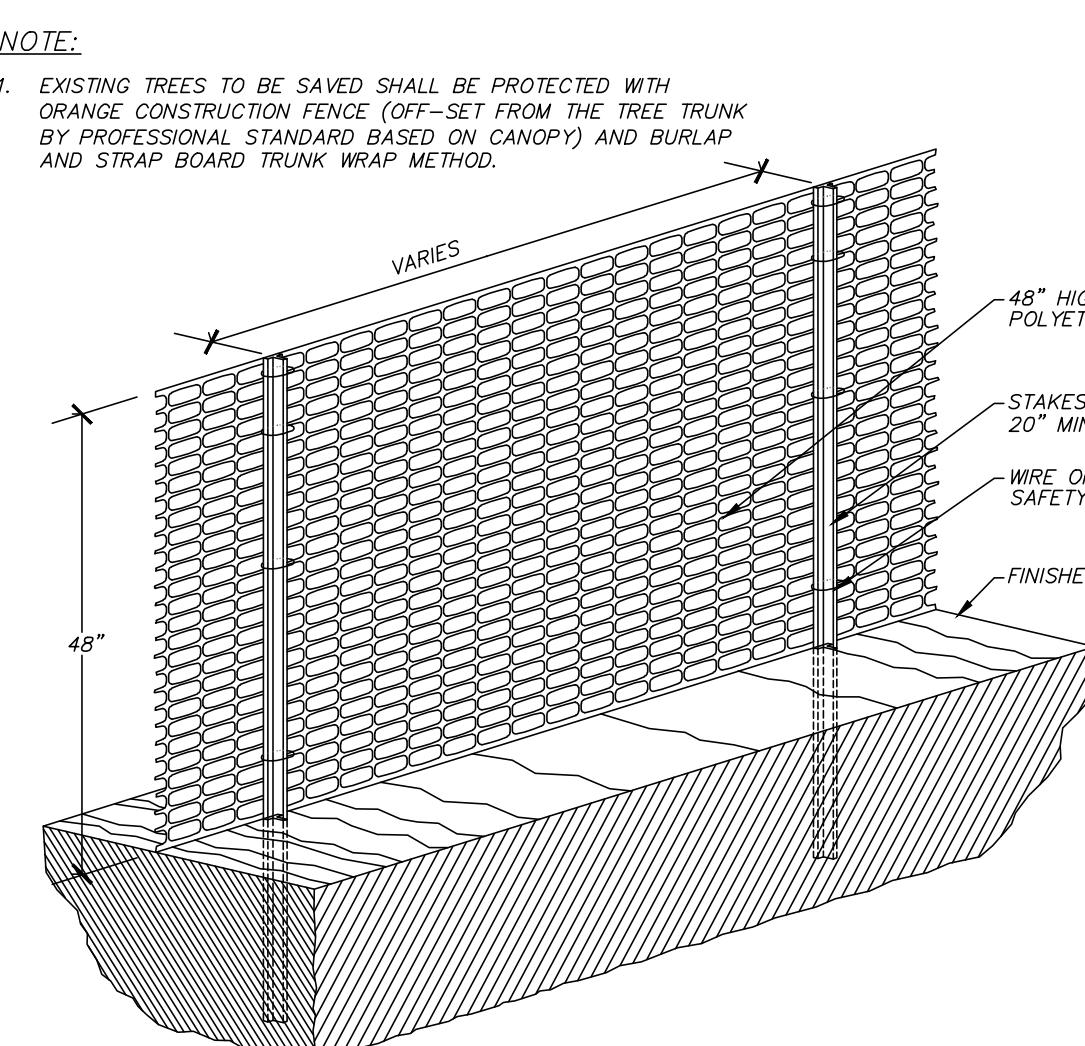
Across-slope shape: Linear, convex
Hydric soil rating: No

Data Source Information

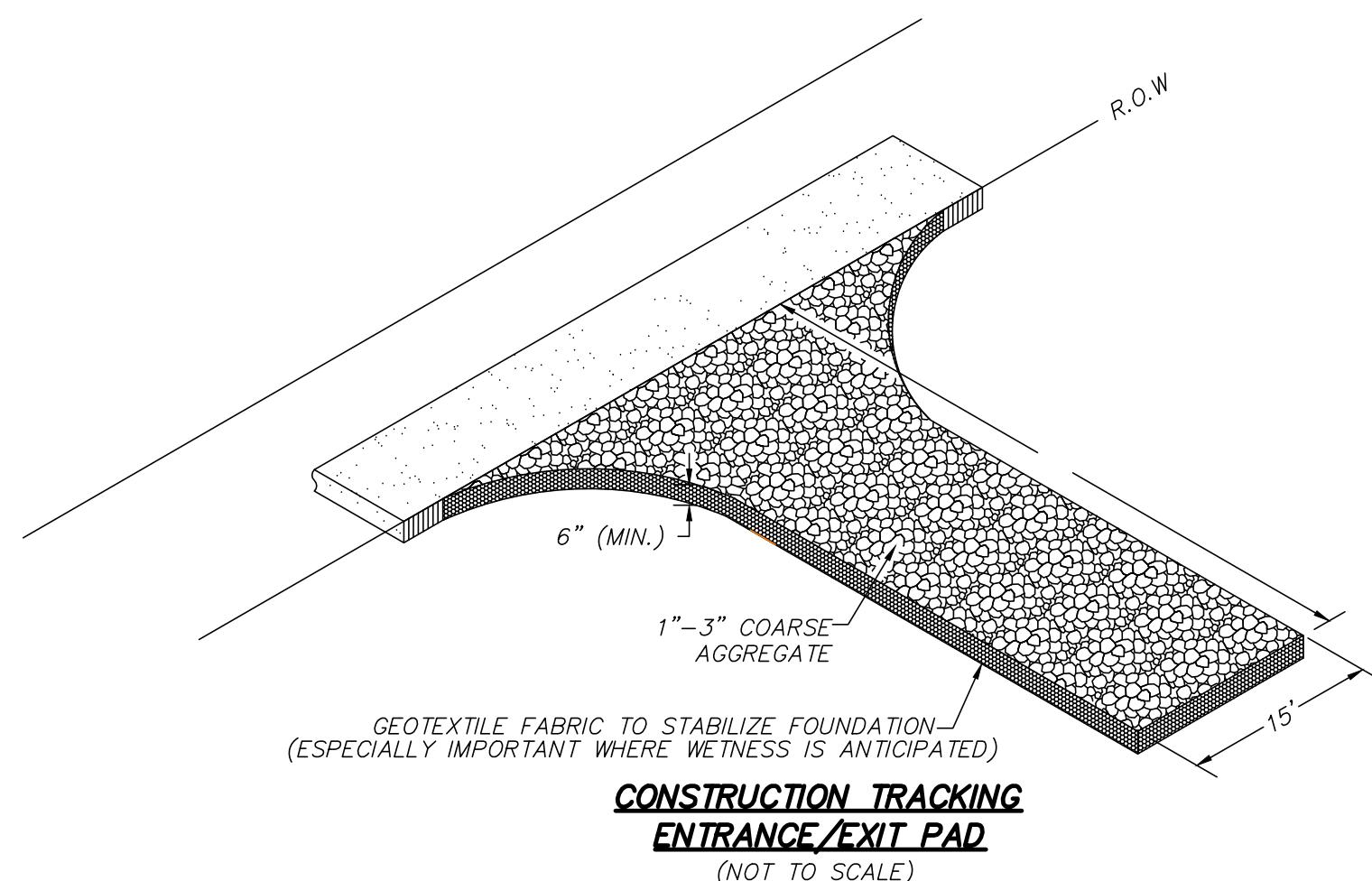
Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 21, Sep 2, 2021



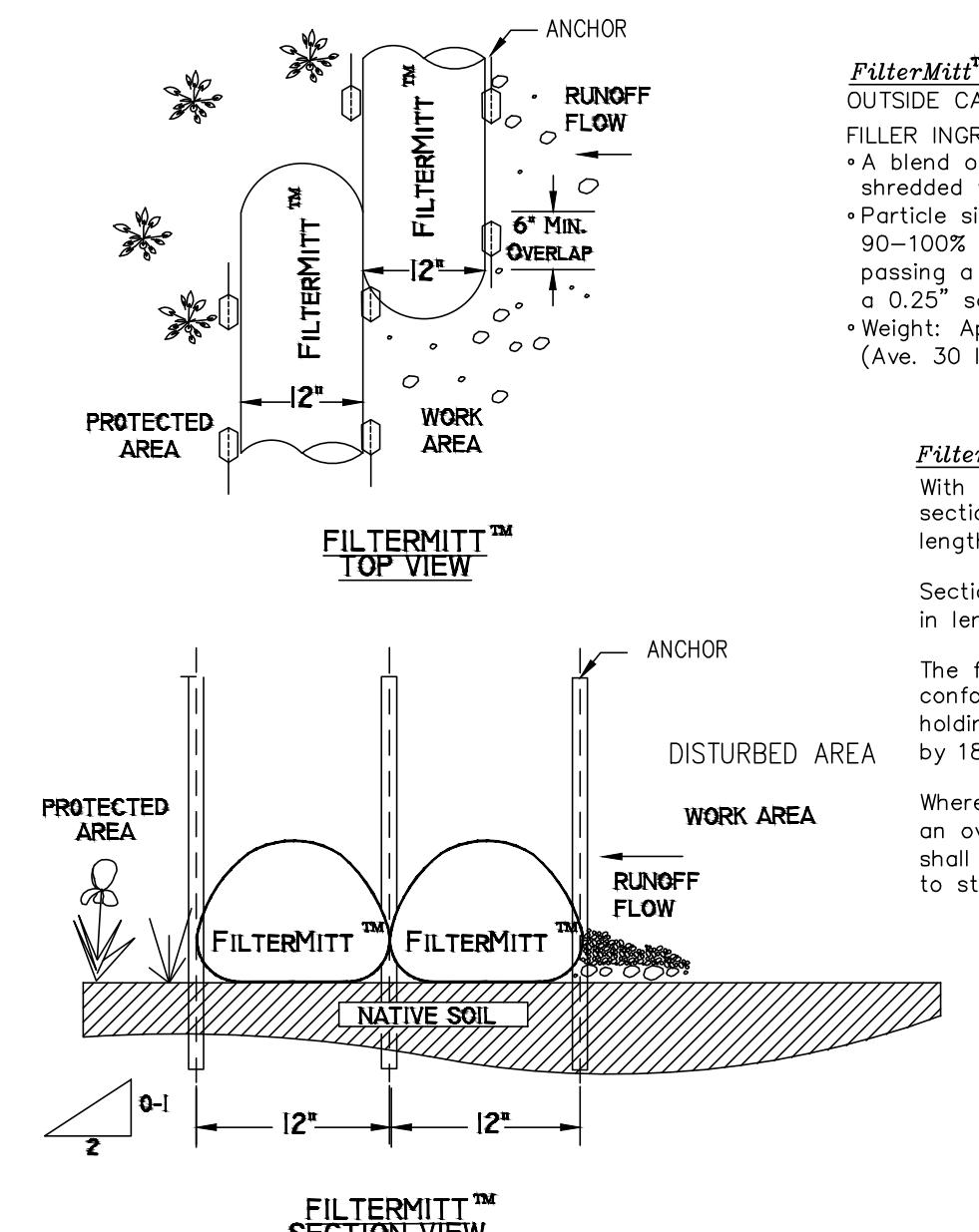




CONSTRUCTION FENCE/TREE PROTECTION
(NOT TO SCALE)



**CONSTRUCTION TRACKING
ENTRANCE/EXIT PAD**
(NOT TO SCALE)

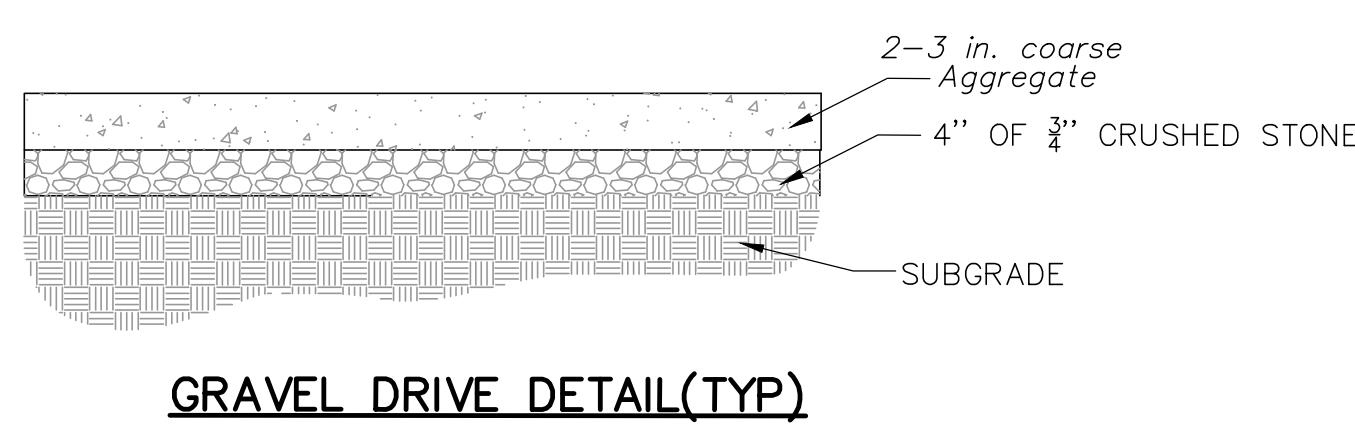


FilterMitt™ COMPONENTS:
OUTSIDE CASING: 100% organic hessian.
FILL: A blend of coarse and fine compost and shredded wood.
Particle sizes: 100% passing a 3" screen; 90-100% passing a 1" screen; 70-100% passing a 0.75" screen; 30-75% passing a 0.25" screen.
Weight: Approx. 850 lbs./cu.yd.
(Ave. 30 lbs./l.f.)

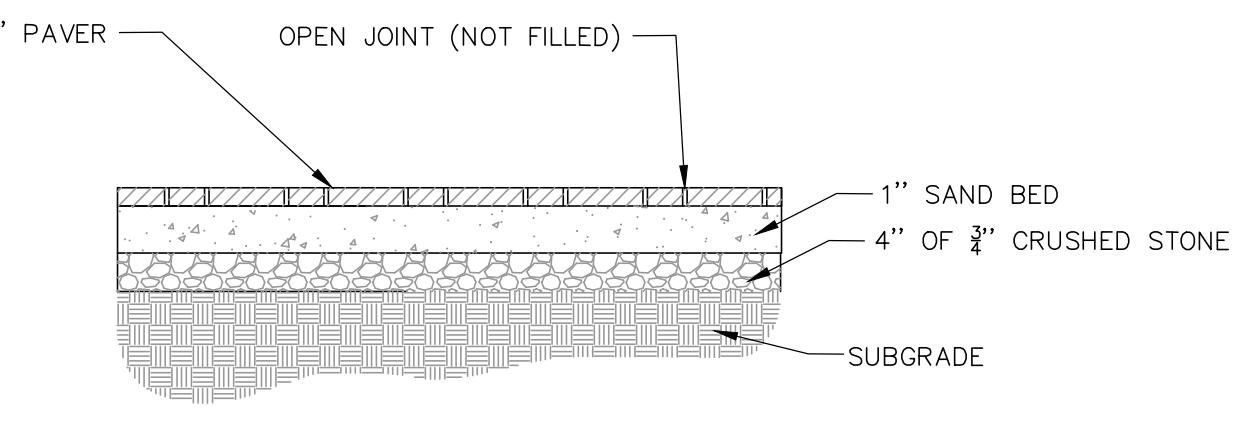
FilterMitt™ INSTALLATION:
With the newest technology and equipment, sections can be constructed on site in lengths from 1' to 100'.
Sections can also be delivered to the site in lengths from 1' to 8'.
The flexibility of FilterMitt allows it to conform to any contour or terrain while holding a slightly oval shape at 12" high by 18" wide.
Where section ends meet there shall be an overlap of 6" or greater. Both sides shall be anchored (oak stakes, trees, etc.) to stabilize the union.

**FILTERMITT™
SECTION VIEW**
(NOT TO SCALE)

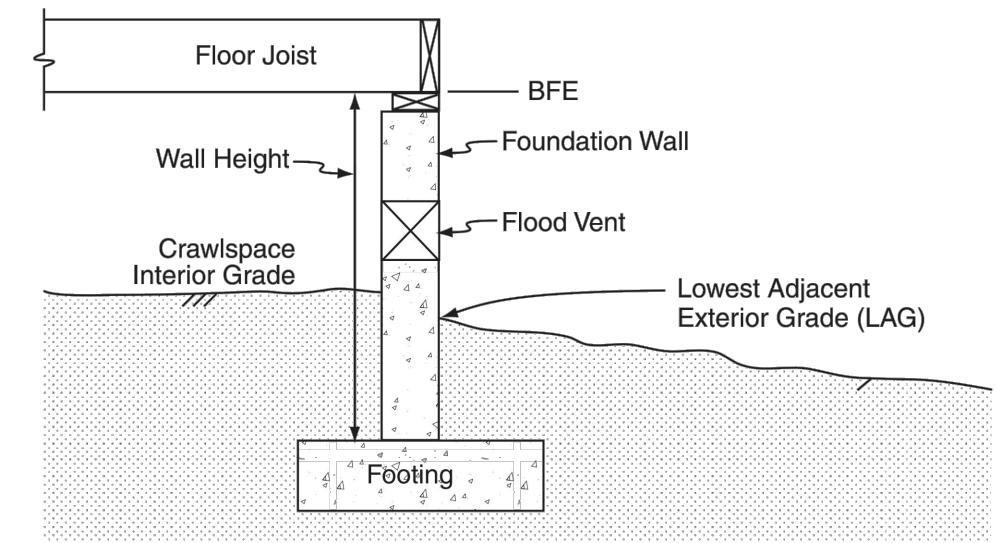
**FILTERMITT™
TOP VIEW**



GRAVEL DRIVE DETAIL(TYP)
(NOT TO SCALE)

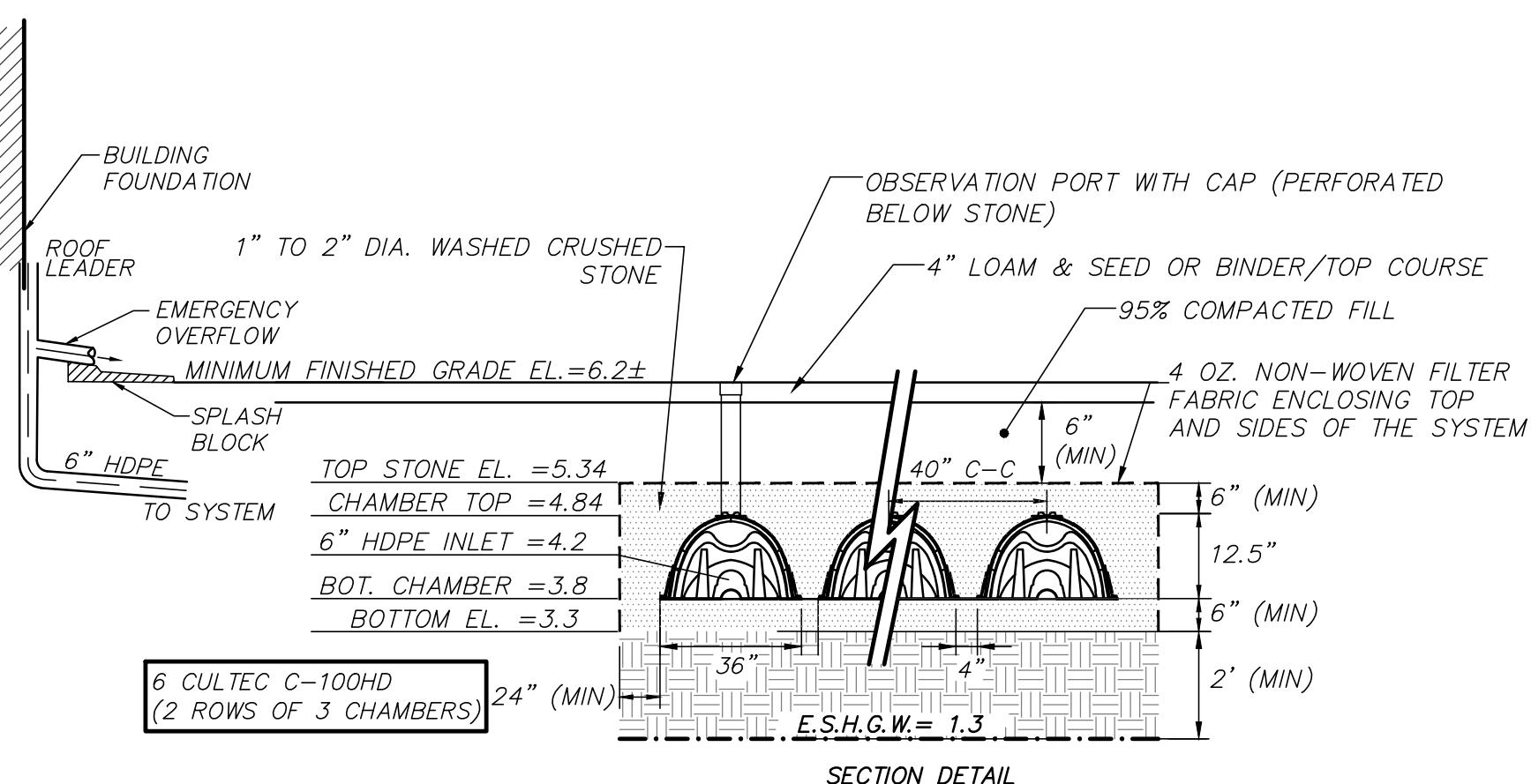


PAVER DETAIL(TYP)
(NOT TO SCALE)

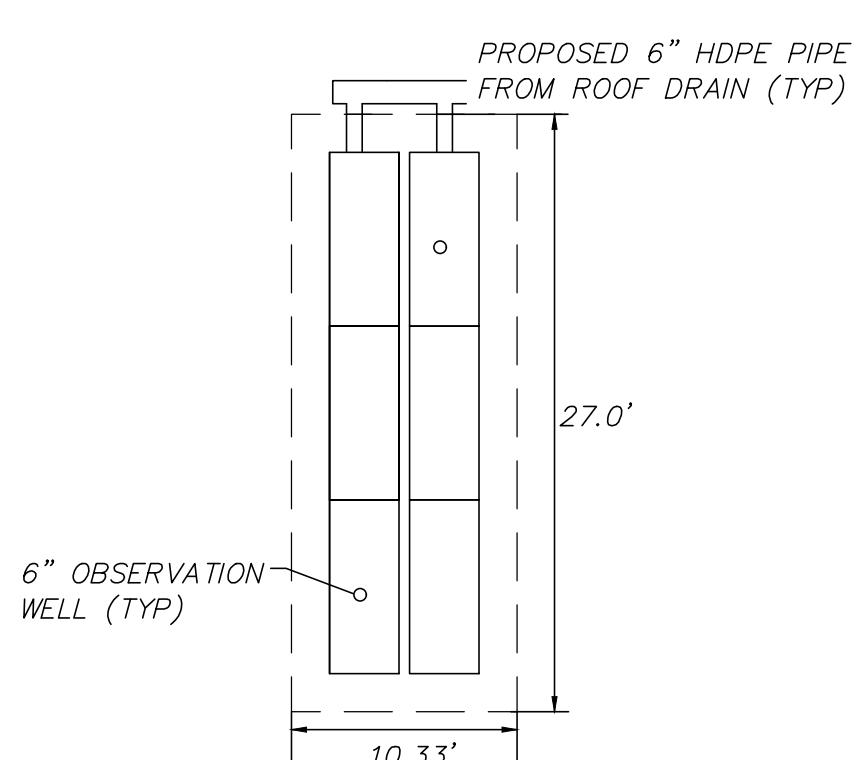


PROPOSED FLOOD VENTS-(CROSS SECTION)
(NOT TO SCALE)

1. (6) FLOOD VENTS TO BE PLACED EVENLY THROUGHOUT THE PROPOSED CRAWL SPACE
2. AREA COVERED BY CRAWL SPACE = 424 SQUARE FEET. AREA TO BE PROVIDED BY FLOOD VENTS = 424 SQUARE INCHES
3. FLOOD VENTS SHALL BE INSTALLED BASED ON REQUIREMENTS IN FEMA TECHNICAL BULLETIN 11



**PROPOSED SUBSURFACE INFILTRATION SYSTEM-2 (PSIS-2)
(CROSS SECTION)**
(NOT TO SCALE)



**PROPOSED SUBSURFACE INFILTRATION SYSTEM -(PSIS)
(PLAN VIEW)**
(NOT TO SCALE)

TEST PIT DATA
TEST PITS PERFORMED BY MICHAEL NOVAK (PE #50696) ON OCTOBER 7, 2021
TEST PIT-1
ELEVATION = 6.2
0'-13" A LOAM
13'-31" B SANDY LOAM
31'-59" C1 SANDY LOAM
59"-90" C2 SANDY LOAM

ESHGW @ EL= 1.28 (59")
WEEPING @ 68"

EROSION CONTROL SEQUENCE

1. LIMITS OF CONSTRUCTION ARE TO BE STAKED OUT AS THE FIRST STEP. NO CONSTRUCTION EQUIPMENT IS ALLOWED BEYOND THE LIMITS AS STAKED. THE AREA BEYOND THE LIMITS OF CONSTRUCTION IS TO REMAIN UNDISTURBED.
2. PLACE FILTERMITT AT LIMITS OF CONSTRUCTION AS DIRECTED ON THE SITE PLANS. SEE APPROPRIATE DETAILS SHOWING HOW TO PROPERLY INSTALL FILTERMITT.
3. AREAS OF DISTURBANCE TO BE KEPT TO A MINIMUM. THE AMOUNT OF TIME AN AREA IS LEFT UNSTABILIZED WILL BE KEPT TO A MINIMUM.
4. STABILIZE ALL DISTURBED AREAS WITH A MINIMUM OF 4" LOAM AND SEED.
5. LEAVE TEMPORARY EROSION CONTROL IN PLACE UNTIL ALL DISTURBED AREAS ARE REVEGETATED.
6. IF THE SITE IS TO BE LEFT OPEN AFTER OCTOBER 15, ALL DISTURBED AREAS ARE TO BE TEMPORARILY STABILIZED BY COVERING WITH MULCH HAY.
7. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION & ARE TO BE PERIODICALLY INSPECTED AND REPAIRED OR REPLACED AS NECESSARY THROUGHOUT THE PROJECT CONSTRUCTION.

FLOOD STORAGE CHART

FILLED FLOOD STRAGE			COMPENSATORY FLOOD STORAGE		
ELEV (FT)	AREA (SF)	VOLUME (CF)	ELEV (FT)	AREA (SF)	VOLUME (CF)
4 to 5	1	1	4 to 5	16	3
5 to 6	45	45	5 to 6	340	102
6 to 7	60	105	6 to 7	427	213

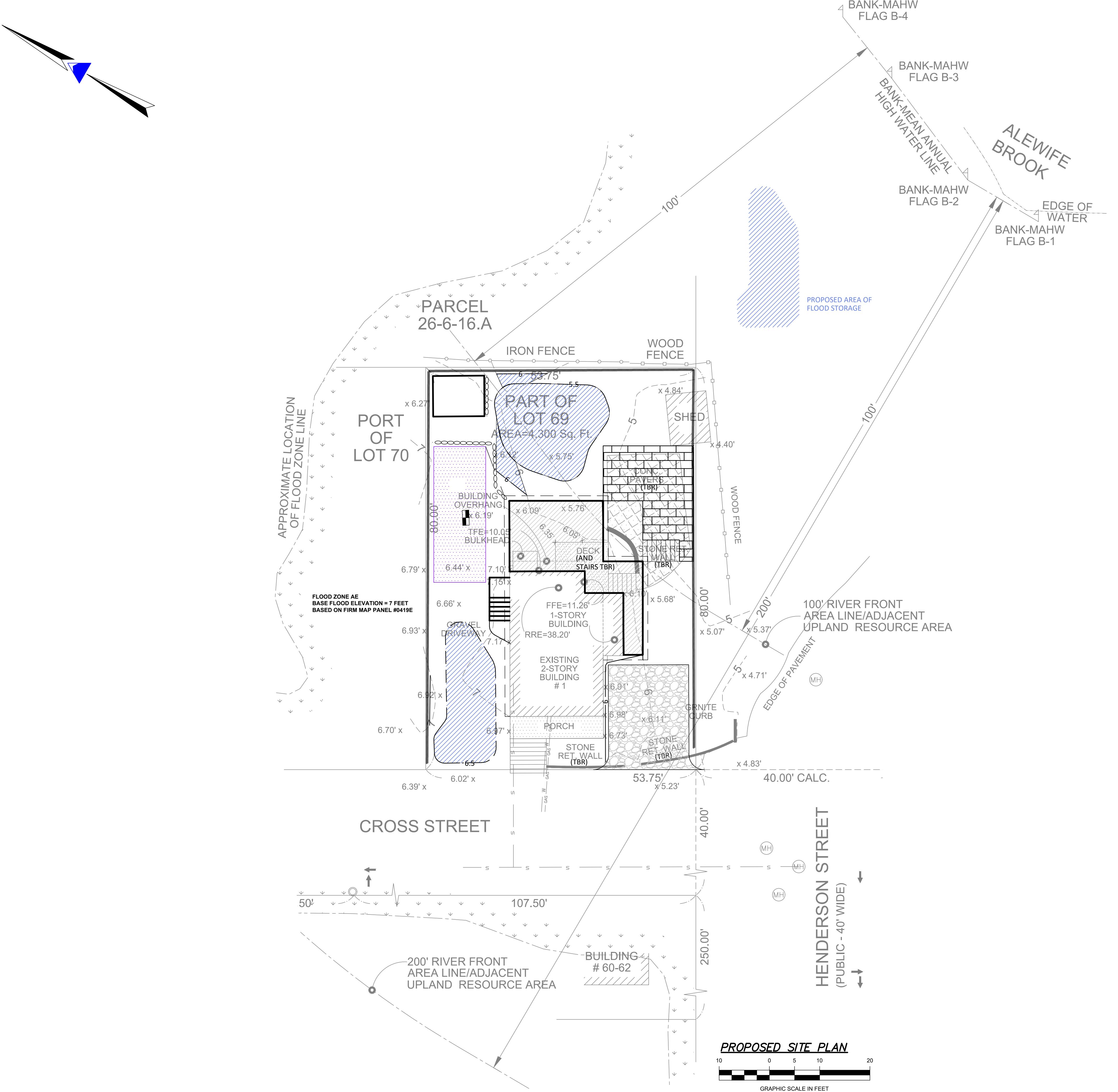
PATRIOT Engineering
35 BIDDEFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 736-2654
www.patriot-eng.com

DESIGNED BY: M. CAPACHETTI CHECKED BY: M. NOVAK

DATE: 10/26/2021
SCALE: AS NOTED
SHEET No. 2 of 2
PROJECT No. 21-38

REVISIONS	11/16/21	REVISE RESOURCE AREA LABEL
DATE	11/16/21	DESCRIPTION

COMMUNALTY OF MASSACHUSETTS
MICHAEL J. NOVAK
No. 50696
REGISTERED
CIVIL ENGINEER
HANNAH NOVAK



NOTES:

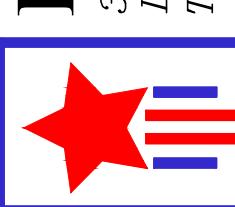
- THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM A PLAN PREPARED BY LAND MAPPING INC. DATED OCTOBER 13, 2021.

THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND COMPILATION OF PLANS OF RECORD. PATRIOT ENGINEERING LLC. DOES NOT WARRANTY NOR GUARANTEE THE LOCATION OF ALL UTILITIES DEPICTED OR NOT DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 1-888-344-7233.

THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.

THE WETLAND FLAGS DEPICTED WERE DEMARCATED BY LEC ENVIRONMENTAL CONSULTANTS

PRIOR TO CONSTRUCTION IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE BENCHMARKS ILLUSTRATED ON THIS SKETCH HAVE NOT BEEN DISTURBED AND THEIR ELEVATIONS HAVE BEEN CONFIRMED. ANY CONFLICTS MUST BE REPORTED PRIOR TO CONSTRUCTION.



DATE: 11/16/2021
SCALE: AS NOTED
SHEET No. 1 OF 1
PROJECT No. 21-38

<i>PREPARED FOR</i>	<i>TIMOTHY KRESSL</i>
<i>DATE</i>	<i>11/16/21</i>
<i>REVISE RESOURCE AREA LABEL</i>	<i>MJN</i>
<i>DESCRIPTION</i>	<i>BY</i>



Town of Arlington, Massachusetts

Request for Determination of Applicability: 64 Wright Street

Summary:

8:45 p.m. Request for Determination of Applicability: 64 Wright Street [LEC]
MassDEP File #091-xxxx

ATTACHMENTS:

Type	File Name	Description
❑ Reference Material	RDA_-_64_Wright_Street.pdf	RDA 64 Wright Street

Request for Determination of Applicability

November 4, 2021

Subject Property

64 Wright Street
Parcel ID: 116-5-11.A
Arlington, Massachusetts

Applicant and Property Owner

Gayle Namchuk
64 Wright Street
Arlington, Massachusetts

LEC Environmental Consultants, Inc.

380 Lowell Street
Suite 101
Wakefield, MA 01880
781-245-2500

www.lecenvironmental.com

November 4, 2021

Hand Delivery

Arlington Conservation Commission
Arlington Town Hall Annex
730 Massachusetts Avenue
Arlington, MA 02476

Re: Request for Determination of Applicability
64 Wright Street
Parcel ID: 116-5-11.A
Arlington, Massachusetts

[LEC File #: NamG\21-301.02]

Dear Members of the Conservation Commission:

On behalf of the Applicant and Property Owner, Gayle Namchuk, LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Request for Determination of Applicability (RDA) with the Arlington Conservation Commission for removal of three (3) trees at 64 Wright Street in Arlington, two of which occur within the 100-foot Buffer Zone to an off-site Bordering Vegetated Wetland (BVW). A Japanese knotweed (*Polygonum cuspidatum*) root barrier is also proposed within the 100-foot Buffer Zone.

LEC was retained to identify Wetland Resource Areas protectable under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40, the *Act*), its implementing Regulations (310 CMR 10.00, the *Act Regulations*), the *Town of Arlington Wetlands Protection Bylaw* (Article 8, the *Bylaw*), and its implementing *Wetlands Protection Regulations* (March 1, 2018, the *Bylaw Regulations*), and to prepare this RDA.

In accordance with the *Bylaw*, nine (9) replacement trees are proposed. The trees proposed to be removed and their associated replacement trees are provided on the *Landscape Plan*, excerpted from a plan of public record and modified by LEC Environmental Consultants, Inc. on November 3, 2021 (*Landscape Plan*, Appendix C).

General Site Description

The 9,147± square foot property is located south of Thesda Street, east of Dothan Street, and off the west side of Wright Street within the northwestern portion of Arlington, Massachusetts (Appendix B, Figures 1 and 3). Single-family dwellings associated with Wright Street, Dothan Street, and Heard Road are located north, south, east, and southwest of the property, while undeveloped land containing forested wetlands and uplands are located northwest of the property. An off-site forested Bordering Vegetated Wetland occurs north of the western portion of the property.

LEC Environmental Consultants, Inc.

www.lecenvironmental.com

12 Resnik Road Suite 1 Plymouth, MA 02360 508.746.9491	380 Lowell Street Suite 101 Wakefield, MA 01880 781.245.2500	100 Grove Street Suite 302 Worcester, MA 01605 508.753.3077	P.O. Box 590 Rindge, NH 03461 603.899.6726	680 Warren Avenue Suite 3 East Providence, RI 02914 401.685.3109 110 of 139
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PLYMOUTH, MA

WAKEFIELD, MA

WORCESTER, MA

RINDGE, NH

EAST PROVIDENCE, RI

The property contains a single-family dwelling with a paver driveway and walkway extending west off of Wright Street to a covered front entrance. A wooden deck and asphalt patio are located off the rear of the dwelling, and a shed is located within the northwestern corner of the property. The dwelling is surrounded by lawn and landscape plants. Landscape plants include hydrangea (*Hydrangea* sp.), day lilies (*Hemerocallis* sp.), hosta (*Hosta* sp.), peonies (*Paeonia* sp.), and Japanese anemone (*Eriocapitella hupehensis*), among others. Scattered shade trees are located throughout the landscaped areas and along the lawn edge, and include a weeping willow (*Salix babylonica*), box elder (*Acer negundo*), arborvitae (*Thuja occidentalis*), Colorado spruce (*Picea pungens*), and Norway maple (*Acer platanoides*). A dense stand of Japanese knotweed (*Polygonum cuspidatum*) occurs along the northern property boundary.



Photo 1. An easterly view of the rear facade of the dwelling from Dothan Street.

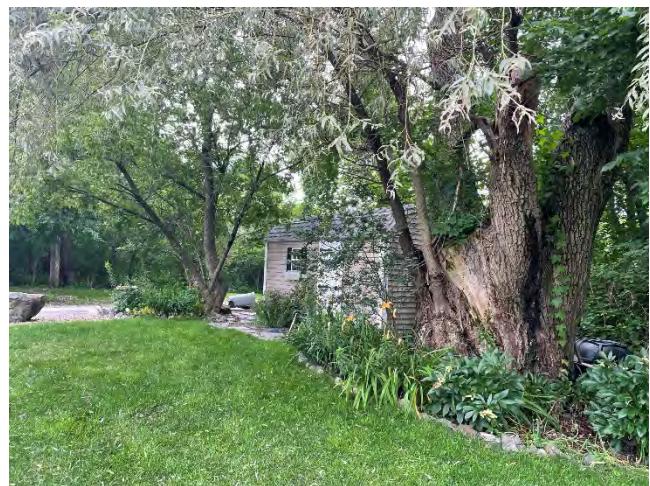


Photo 2. A northwesterly view of the shed in the northwestern corner of the property.

Natural Heritage and Endangered Species Program Designation

According to the 15th Edition of the Massachusetts Natural Heritage Atlas (effective August 1, 2021) published by the Natural Heritage & Endangered Species Program (NHESP), no areas of Estimated Habitats of Rare Wildlife or Priority Habitats for Rare Species, or Potential or Certified Vernal Pools exist on the site (Appendix A, Figure 3).

Floodplain Designation

According to the June 4, 2010 Federal Emergency Management Agency Flood Insurance Rate Map for Middlesex County, Massachusetts (Map No: 25017C0416E), the entire property is located within Zone X (unshaded): *Areas determined to be outside the 0.2% annual chance floodplain*. As a result, the site is not jurisdictional as Bordering Land Subject to Flooding (BLSF).

Wetland Boundary Determination Methodology

LEC conducted a site evaluation on July 14, 2021 to identify and characterize existing protectable Wetland Resource Areas located on or immediately adjacent to the site. The extent of Wetland Resource Areas was determined through observations of existing plant communities and hydrologic indicators in accordance with the *Act*, its implementing *Regulations*, the *Bylaw*, and its *Regulations*.

Based on these methods and review of pertinent maps, LEC determined that the wetland resource areas associated with the site are limited to an off-site Bordering Vegetated Wetland (BVW). LEC did not have access authorization to delineate the off-site BVW. This BVW boundary was previously delineated by others and is shown on a plan of public record. LEC observed the BVW from the property and right-of-way and it generally appears to be accurate. The BVW boundary is shown on the *Landscape Plan*.

A brief description of the Wetland Resource Areas is provided below.

Bordering Vegetated Wetlands

BVW is defined at 310 CMR 10.55(2) as: *freshwater wetlands which border on creeks, rivers, streams, ponds, and lakes...Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants...The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.*

According to the *Bylaw Regulations* [Section 21 B. (1) and (2)], *Vegetated Wetlands are freshwater wetlands, including both bordering vegetated wetlands (i.e., bordering on freshwater bodies such as on creeks, rivers, streams, ponds and lakes), and isolated vegetated wetlands which do not border on any permanent water body. The types of freshwater wetlands are wet meadows, marshes, swamps, bogs and vernal pools. Vegetated Wetlands are areas where soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The ground water and surface water hydrological regime, soils and the vegetational community which occur in each type of freshwater wetlands, including both bordering and isolated vegetated wetlands, are defined under the Bylaw based on G.L. c. 131, § 40. (2) The boundary of Vegetated Wetland, whether Bordering or Isolated, is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist. Wetland indicator plants shall include but not necessarily be limited to those plant species identified in the Act.*

An off-site forested BVW occurs north of the backyard. Vegetation within the BVW includes a canopy of scattered patches of red maple (*Acer rubrum*), and individuals of Norway maple. The understory includes individuals of multiflora rose (*Rosa multiflora*) and European buckthorn (*Frangula alnus*). The understory includes patches of poison ivy (*Toxicodendron radicans*), bedstraw (*Gallium* sp.), Japanese knotweed (*Polygonum cuspidatum*), Virginia creeper (*Parthenocissus quinquefolia*), and individuals of rough stem goldenrod (*Solidago rugosa*).

Proposed Activities

Trees to be Removed

The Applicant proposes to cut three (3) trees on the property, a weeping willow (*Salix babylonica*), and two (2) box elders (*Acer Negundo*). The weeping willow and one box elder are located within the 100-foot Buffer Zone to the off-site BVW and measure more than 50 feet away from the BVW boundary.

The weeping willow is located along the northern property boundary, east of the shed. The tree measures 78 inches at DBH and has a sparse canopy. It is proposed to be cut 8 to 10 feet off the ground, and the remaining stump/trunk will be left as a landscape feature. The weeping willow was assessed by a Certified Arborist and is considered a high-risk tree that is recommended to be removed. The tree assessment is detailed in the attached *Tree Assessment Report*, prepared by Keith Bernard, Certified Arborist of Barrett Tree Service East, Inc., and dated July 9, 2021 (Attachment D).

The box elder proposed to be removed within the 100-foot Buffer Zone is located south of the shed. Its largest trunk measures 12 inches at DBH and is located more than 50 feet away from the BVW boundary. The second box elder proposed to be removed is located outside of the 100-foot Buffer Zone along the northern property boundary, and its largest trunk measures 11 inches at DBH. The two box elders will be cut flush with the ground.

The locations of the 3 trees proposed to be removed can be found on the *Landscape Plan* (Attachment C) and associated tree details can be found below in Table 1.



Photo 3. Northwesterly view of the weeping willow proposed to be removed.



Photo 4. Northwesterly view of the weeping willow proposed to be removed.



Photo 5. Northerly view of the box elder located within the 100-foot Buffer Zone proposed to be removed.

Table 1. Trees to Be Removed

Tree	Species	DBH	Estimated Spread	Estimated Canopy Cover
1. Box Elder	<i>Acer negundo</i>	12" (largest trunk)	30'	700± s.f.
2. Box Elder	<i>Acer negundo</i>	11" (largest trunk)	30'	700± s.f.
3. Weeping Willow	<i>Salix babylonica</i>	78"	65' (sparse)	3,318± s.f. (sparse)

Proposed Replacement Trees

The Applicant proposes to plant nine (9) replacement trees for the 3 trees proposed to be removed, in accordance with the *Bylaw Regulations* (Section 24). Three (3) of the nine (9) replacement trees will be planted within the 100-foot Buffer Zone. Furthermore, six (6) of the nine replacement species are native to

the northeast and will provide food for wildlife, support native pollinators by providing pollen and nectar, and serve as larval hosts for native butterflies and/or moths. Locations of the proposed replacement trees can be found on the *Landscape Plan* (Attachment C) and their details can be found below in Table 2.

The Applicant proposes to monitor the condition of the replacement trees for three full growing season and prepare annual reports for the Arlington Conservation Commission documenting the monitoring effort. These reports will include the status of the replacement trees, representative photographs, and any management efforts implemented to ensure success such as replacement of dead saplings.

Table 2. Replacement Trees

Tree	Species	DBH	Canopy Spread at 15 Years	Native to Northeast?	Invasive?
1. Bald cypress	<i>Taxodium distichum 'Mickelson'</i>	2-3.5"	20'	No	No
2. Red maple	<i>Acer rubrum 'Armstrong gold'</i>	2-3.5"	13'	Yes	No
3. Black gum	<i>Nyssa sylvatica 'Wildfire'</i>	2-3.5"	30'	Yes	No
4. Crape Myrtle	<i>Lagerstroemia indica 'Red Rocket'</i>	2-3.5"	20'	No	No
5. Fringe-tree	<i>Chionanthus virginicus 'Spring Fleecing'</i>	2-3.5"	20'	No	No
6. Flowering dogwood	<i>Cornus florida 'Cherokee Brave'</i>	2-3.5"	30'	Yes	No
7. Serviceberry	<i>Amelanchier x grandiflora 'Autumn Brilliance'</i>	2-3.5"	20'	Yes	No
8. Red maple X Silver maple	<i>Acer x freeman 'Autumn Blaze'</i>	2-3.5"	25'	Yes	No
9. Witch Hazel	<i>Hamamelis virginiana 'Green Thumb'</i>	2-3.5"	20'	Yes	No

Proposed Japanese Knotweed Root Barrier

The Applicant also proposes to install a root barrier along the lawn edge to prevent further encroachment by the dense stand of Japanese knotweed along the northern property boundary. A 1-to-2-meter-deep trench will be excavated with a mini-excavator, and an interwoven reinforced polyethylene (or similar) barrier will be placed within the trench. After installing the barrier, the trench will be backfilled and any disturbed soil will be restored to lawn. The exact location of the root barrier will be determined at the time of installation, and will be located far enough away from any trees so as to not significantly inhibit tree growth.

Summary

On behalf of the Applicant and Property Owner, Gayle Namchuk, LEC is filing the enclosed RDA with the Arlington Conservation Commission to remove three trees located at 64 Wright Street in Arlington, two of which are located within the 100-foot Buffer Zone to an off-site BVW. The Applicant proposes to plant nine replacement trees in accordance with the *Bylaw Regulations*. Six of the proposed replacement trees are native to the northeast and will improve the function and value of the Buffer Zone by providing wildlife habitat for native species. A root barrier is proposed along the lawn edge to manage the encroachment of Japanese knotweed. Accordingly, the Applicant requests that the Commission issue a Negative Determination of Applicability approving the project as proposed.



Thank you for your consideration of this RDA. We look forward to meeting with you at the November 18, 2021 Public Hearing. Should you have any questions, please do not hesitate to contact me in our Wakefield office at 781-245-2500 or at jhoogeboom@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

Julia Hoogeboom

Julia Hoogeboom
Wetland Specialist

Richard A. Kirby
Senior Wetland Scientist

cc: DEP, Northeast Region
Gayle Namchuck

jah: projects\21-301.02 NamG\RDA Letter.doc

Arlington Conservation Commission, *Town of Arlington Wetlands Protection Bylaw* (Article 8) Town of Arlington, Massachusetts.

Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways 1995. *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act, A Handbook.* 89 pp.

Massachusetts Natural Heritage and Endangered Species Program Atlas of Estimated Habitat of State-listed Rare Wetlands Wildlife, Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, Route 135, Westborough, MA 01581, www.state.ma.us/dfwele/dfw

Massachusetts Wetlands Protection Act (M.G.L. c. 131, §. 40), www.state.ma.us/dep
Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00),
www.state.ma.us/dep

National Flood Insurance Program, Federal Emergency Management Agency Flood Insurance Rate Map, Middlesex County, June 4, 2010.

New England Hydric Soils Technical Committee. 2019, 4th ed., *Field Indicators for Identifying Hydric Soils in New England*, New England Interstate Water Pollution Control Commission, Lowell, MA.

Reed, P.B. 1988. *National List of Plant Species that Occur in Wetlands: 1988 Massachusetts.* U.S. Department of the Interior, Fish and Wildlife Service. NERC-88/18.21

Appendix A

WPA Form 1 – Request for Determination of Applicability
Bylaw Filing Fees and Transmittal Form

Affidavit of Service
Letter to Abutters
Abutter Notification Form
Certified List of Abutters



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Arlington

City/Town

WPA Form 1- Request for Determination of Applicability

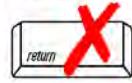
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Arlington Wetlands Protection Bylaw (Article 8)

A. General Information

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Gayle Namchuk

gaylenamchuk@gmail.com

Name

E-Mail Address

64 Wright Street

Mailing Address

Arlington

MA

02474

City/Town

State

Zip Code

781-648-4108

Phone Number

N/A

Fax Number (if applicable)

2. Representative (if any):

LEC Environmental Consultants, Inc.

Firm

jhoogeboom@lecenvironmental.com

Contact Name

E-Mail Address

380 Lowell Street, Suite 101

Mailing Address

MA

01880

Wakefield

State

Zip Code

City/Town

781-245-6677

781-245-2500

Phone Number

Fax Number (if applicable)

B. Determinations

1. I request the Arlington _____ make the following determination(s). Check any that apply:
Conservation Commission

- a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance or bylaw** of:

Arlington
Name of Municipality

- e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Arlington
City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Arlington Wetlands Protection Bylaw (Article 8)

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

64 Wright Street _____
Street Address _____
116-5-11.A _____
Assessors Map/Plat Number _____
Arlington _____
City/Town _____
Parcel/Lot Number _____

- b. Area Description (use additional paper, if necessary):

The 9,147± square foot property is located south of Thesda Street, east of Dothan Street, and off the west side of Wright Street within the northwestern portion of Arlington. Single-family dwellings associated with Wright Street, Dothan Street, and Heard Road are located north, south, east, and southwest of the property, while undeveloped land containing forested wetlands and uplands are located northwest of the property. An offsite forested Bordering Vegetated Wetland occurs north of the western portion of the property. The property contains a single-family dwelling with a paver driveway and walkway extending west off of Wright Street to a covered front entrance. A wooden deck and paved area are located off the rear of the dwelling and a shed occurs within the northwestern corner of the property. The dwelling is surrounded by lawn and landscape plants. A dense stand of Japanese knotweed (*Polygonum cuspidatum*) occurs along the northern property boundary and lawn edge.

- c. Plan and/or Map Reference(s):

Landscape Plan Landscape Plan, as taken from a plan of public record and modified by LEC Environmental Consultants, Inc.

November 3, 2021
Date

Title _____

Title _____

Date _____

Title _____

Date _____

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

The Applicant proposes to remove three (3) trees at 64 Wright Street in Arlington, two of which occur within the 100-foot Buffer Zone to an off-site Bordering Vegetated Wetland (BVW) and located more than 50-feet away from the BVW boundary. In accordance with the Bylaw, nine (9) replacement trees are proposed, six (6) of which are native to the northeast. A Japanese knotweed root barrier is also proposed within the 100-foot Buffer Zone to prevent further encroachment of Japanese knotweed onto the property.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Arlington
City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Arlington Wetlands Protection Bylaw (Article 8)

C. Project Description (cont.)

- b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

No disturbance to the ground is proposed except for the installation of a Japanese knotweed root barrier to prevent further encroachment into the lawn. The two trees proposed to be removed within the 100-foot Buffer Zone are located more than 50 feet away from BVW boundary.

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- Single family house on a lot recorded on or before 8/1/96
 - Single family house on a lot recorded after 8/1/96
 - Expansion of an existing structure on a lot recorded after 8/1/96
 - Project, other than a single-family house or public project, where the applicant owned the lot before 8/7/96
 - New agriculture or aquaculture project
 - Public project where funds were appropriated prior to 8/7/96
 - Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
 - Residential subdivision; institutional, industrial, or commercial project
 - Municipal project
 - District, county, state, or federal government project
 - Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.
- b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Arlington
City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Arlington Wetlands Protection Bylaw (Article 8)

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Gayle Namchuk

Name

64 Wright St

Mailing Address

Arlington

City/Town

MA

State

02474

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.


Signature of Applicant

11/1/21

Date


Jutta Hoogeboom

10/27/2021

Date

Bylaw Filing Fees and Transmittal Form

Rules:

1. Fees are payable at the time of filing the application and are non-refundable.
2. Fees shall be calculated per schedule below.
3. Town, County, State, and Federal Projects are exempt from fees.
4. These fees are in addition to the fees paid under M.G.L. Ch. 131, s.40 (ACT).

Fee Schedule (ACC approved 1/8/15):

\$	No./Area	Category
\$150.00	1	(R1) RDA- \$150 local fee, no state fee
		(N1) Minor Project - \$200 (house addition, tennis court, swimming pool, utility work, work in/on/or affecting any body of water, wetland or floodplain).
		(N2) Single Family Dwelling - \$600
		(N3) Multiple Dwelling Structures - \$600 + \$100 per unit all or part of which lies within 100 feet of wetlands or within land subject to flooding.
		(N4) Commercial, Industrial, and Institutional Projects - \$800 + 50¢/s.f. wetland disturbed; 2¢/s.f. land subject to flooding or buffer zone disturbed.
		(N5) Subdivisions - \$600 + \$4/l.f. feet of roadway sideline within 100 ft. of wetlands or within land subject to flooding.
		(N6) Other Fees - copies, printouts; per public records law
		(N7) Minor Project Change - \$50
		(N8) Work on Docks, Piers, Revetments, Dikes, etc - \$4 per linear foot
		(N9) Resource Boundary Delineation (ANRAD) - \$1 per linear foot
		(N10) Certificate of Compliance (COC or PCOC) - No charge if before expiration of Order, \$200 if after that date.
		(N11) Amendments - \$300 or 50% of original local filing fee, whichever is less.
		(N12) Extensions - a. Single family dwelling or minor project - \$100. b. Other - \$150.
		(N13) Consultant Fee -per estimate from consultant
\$150.00	TOTAL	

Note: Submit this form along with the forms submitted for the ACT - the "Wetlands Filing Fee Calculations Worksheet," and the "Notice of Intent Fee Transmittal Form."

AFFIDAVIT OF SERVICE

Under the
Massachusetts Wetlands Protection Act (M.G.L. c. 131, s. 40),
its implementing *Regulations* (310 CMR 10.00),
and the
the Town of Arlington Wetlands Protection Bylaw

I, Sharon A. Sullivan, on behalf of Gayle Namchuk, hereby certify under the pains and penalties of perjury that on November 4, 2021 I gave notification to abutters in compliance with the *Massachusetts Wetlands Protection Act (M.G.L. c. 131, s. 40)*, its implementing *Regulations* (310 CMR 10.00), and the *Town of Arlington Wetlands Protection Bylaw* in connection with the following matter:

A Request for Determination of Applicability filed under the *Massachusetts Wetlands Protection Act* and the *Town of Arlington Wetlands Protection Bylaw* by LEC Environmental Consultants, Inc. on behalf of the Applicant, Gayle Namchuk, with the Town of Arlington Conservation Commission on November 4, 2021 for property located at 64 Wright Street (Assessor's Parcel ID: 116-5-11.A) in Arlington, Massachusetts.

The form of notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

Sharon A. Sullivan
Sharon A. Sullivan
Permitting Technician

11/4/2021
Date

November 4, 2021

CERTIFIED MAIL

«Name»
«Name2»
«Address»
«City», «State» «Zip»

Re: Notice of Intent Application
64 Wright Street
Assessor's Parcel ID: 116-5-11.A
Arlington, Massachusetts

[LEC File #: NamG\21-301.02]

Dear Abutter:

On behalf of the Applicant, Gayle Namchuk, LEC Environmental Consultants, Inc. (LEC) has filed a Request for Determination of Applicability with the Arlington Conservation Commission for removal of three (3) trees at 64 Wright Street. The trees occur within the 100-foot Buffer Zone to an offsite Bordering Vegetated Wetland. Nine (9) replacement trees are proposed in accordance with Arlington's Tree Removal Policy, and a Japanese knotweed root barrier also is proposed.

The Request for Determination of Applicability and accompanying plans are available for review by contacting the Arlington Conservation Commission. The remote Public Hearing will be held on November 18, 2021 beginning at 7:30 p.m., in accordance with the provisions of the *Act, Regulations, Bylaw, and Bylaw Regulations*. Further information regarding this application will be published at least five (5) days in advance in *The Arlington Advocate*. Notice of the Public Hearing will also be posted at the Arlington Town Hall at least 48 hours in advance. Please check the Town's website and the Board/Committee's page for any updated information on the meeting.

Please do not hesitate to review the materials and/or attend the public hearing should you have questions or concerns about the proposed project.

Sincerely,

LEC Environmental Consultants, Inc.



Richard A. Kirby
Senior Wetland Scientist

LEC Environmental Consultants, Inc.

www.lecenvironmental.com

12 Resnik Road Suite 1 Plymouth, MA 02360 508.746.9491	380 Lowell Street Suite 101 Wakefield, MA 01880 781.245.2500	100 Grove Street Suite 302 Worcester, MA 01605 508.753.3077	P. O. Box 590 Rindge, NH 03461 603.899.6726	680 Warren Avenue Suite 3 East Providence, RI 02914 401.685.3109 124 of 139
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Notification to Abutters Under the
Massachusetts Wetlands Protection Act
and the
Town of Arlington Wetlands Protection Bylaw

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and the Town of Arlington Wetlands Protection Bylaw, you are hereby notified of the following:

- A. The name of the Applicant is Gayle Namchuk, 64 Wright Street, Arlington, Massachusetts.
- B. The Applicant has filed a Request for Determination of Applicability with the Conservation Commission for the municipality of Arlington, Massachusetts seeking permission to remove, fill, dredge or alter an Area Subject to Protection under Wetlands Protection Act (General Laws Chapter 131, Section 40) and the Town of Arlington Wetlands Protection Bylaw.
- C. The activity is proposed on a lot located at 64 Wright Street (Assessor's Parcel ID: 116-5-11.A), Arlington, Massachusetts.
- D. Copies of the Request for Determination of Applicability may be examined by contacting the Arlington Conservation Commission at (781) 316-3012.

For more information, call: LEC Environmental Consultants, Inc. (the Applicant's representative) at (781) 245-2500.

- E. Copies of the Request for Determination of Applicability may be obtained from LEC Environmental Consultants, Inc. (the applicant's representative) by calling (781) 245-2500 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. A fee may be charged for each copy requested.
- F. Information regarding the public hearing may be obtained from the Arlington Conservation Commission (the regulatory agency) by calling (781) 316-3012.

NOTE: Notice of the Public Hearing, including its date, time, and place, will be published at least five (5) days in advance in The Arlington Advocate.

NOTE: Notice of the public hearing will also be posted at the Arlington Town Hall not less than 48 hours in advance.

NOTE: You also may contact the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:
Northeast Region: 978-694-3200



Office of the
Board of Assessors
Robbins Memorial Town Hall
Arlington, MA 02476
(781) 316-3050
Assessors@town.arlington.ma.us

Abutters List

Date: October 26, 2021

Subject Property Address: 64 WRIGHT ST Arlington, MA
Subject Property ID: 116-5-11.A

Search Distance: 100 Feet

The Board of Assessors certifies the names and addresses of requested parties in interest, all abutters within 100 feet of the property lines, of subject property.

A handwritten signature in black ink, appearing to read "Robert E. Greeley". Below it is a smaller, stylized signature that looks like "O'Leary".

Board of Assessors

Abutters List

Date: October 26, 2021

Subject Property Address: 64 WRIGHT ST Arlington, MA
Subject Property ID: 116-5-11.A

Search Distance: 100 Feet

Prop ID: 109-2-14

Prop Location: 0-LOT SUMMER ST Arlington, MA
Owner: TOWN OF ARLINGTON
Co-Owner:
Mailing Address:
730 MASS AVENUE
ARLINGTON, MA 02476

Prop ID: 112-5-20

Prop Location: 0-LOT REED ST Arlington, MA
Owner: TOWN OF ARLINGTON
Co-Owner:
Mailing Address:
730 MASS AVENUE
ARLINGTON, MA 02476

Prop ID: 116-1-10.A

Prop Location: 31 HEARD RD Arlington, MA
Owner: FAUNDEZ RICARDO S
Co-Owner: ZUCKERMAN NAOMI J
Mailing Address:
31 HEARD RD
ARLINGTON, MA 02474

Prop ID: 116-1-11.A

Prop Location: 27 HEARD RD Arlington, MA
Owner: HANOVER CONOR A
Co-Owner: HANOVER NICOLE WOODSON
Mailing Address:
27 HEARD RD
ARLINGTON, MA 02474

Prop ID: 116-1-9.C

Prop Location: 77 WRIGHT ST Arlington, MA
Owner: SULLIVAN PETER J & BEVERLY
Co-Owner:
Mailing Address:
77 WRIGHT STREET
ARLINGTON, MA 02474

Prop ID: 116-5-11.A

Prop Location: 64 WRIGHT ST Arlington, MA
Owner: NAMCHUK MARK
Co-Owner: NAMCHUK GAYLE
Mailing Address:
64 WRIGHT ST
ARLINGTON, MA 02474

Prop ID: 116-5-12.A

Prop Location: 60 WRIGHT ST Arlington, MA
Owner: ETHIER MARK S ETAL/ TRUSTEES
Co-Owner: ETHIER CHENEY REVOCABLE TRUST
Mailing Address:
60 WRIGHT ST
ARLINGTON, MA 02474

Prop ID: 116-5-7

Prop Location: 76 WRIGHT ST Arlington, MA
Owner: TREMBLY-BJORNGJELD BETTY
Co-Owner:
Mailing Address:
76 WRIGHT ST
ARLINGTON, MA 02474

Prop ID: 116-5-8

Prop Location: 0-LOT DOTHAN ST Arlington, MA
Owner: TOWN OF ARLINGTON
Co-Owner: TAX POSSESSION
Mailing Address:
730 MASS AVENUE
ARLINGTON, MA 02476

Prop ID: 116-5-9

Prop Location: 68 WRIGHT ST Arlington, MA
Owner: MC CARTHY BARBARA A
Co-Owner: MC CARTHY PAUL
Mailing Address:
68 WRIGHT ST
ARLINGTON, MA 02474

Prop ID: 116-5-9.A

Prop Location: 0-LOT DOTHAN ST Arlington, MA
Owner: BUGDEN CHARLES & SUSAN
Co-Owner: BUGDEN CHRISTOPHER & JOHN
Mailing Address:
9 SCOTT ROAD
LITTLETON, MA 01460

Prop ID: 116-6-1

Prop Location: 26 HEARD RD Arlington, MA
Owner: SBROGNA MATTHEW
Co-Owner: FARIAS ABIGAIL
Mailing Address:
26 HEARD RD
ARLINGTON, MA 02474

Prop ID: 116-8-3.A

Prop Location: 16 DOTHAN ST Arlington, MA
Owner: CONTY CHRISTOPHER R &
Co-Owner: PATRICIA WARDEN
Mailing Address:
16 DOTHAN STREET
ARLINGTON, MA 02474

Prop ID: 116-8-4.A
Prop Location: 12 DOTHAN ST Arlington, MA
Owner: HARRINGTON ROBERT E/ETAL
Co-Owner: HARRINGTON EILEEN M
Mailing Address:
12 DOTHAN STREET
ARLINGTON, MA 02474

Prop ID: 117-3-9
Prop Location: 0-LOT DOTHAN ST Arlington, MA
Owner: TOWN OF ARLINGTON
Co-Owner:
Mailing Address:
730 MASS AVENUE
ARLINGTON, MA 02476



McClenen Park

The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.

0 100

200 ft

Printed on 10/26/2021 at 02:22 PM

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43

84

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Wright St

Wright St

Heard Rd

- Places by Category
- Police Station
 - Fire Station
 - School
 - Library
 - Public Works
 - Recreation - Facilities
 - Recreation - Fields Courts
 - Open Space: Conservation
 - Open Space - Minuteman
 - Open Space - Labels
 - Open Space
 - Town, State, or Private
 - Other Town Owned
 - MA Highways
 - Interstate
 - US Highway
 - Numbered Routes
 - Abutting Towns
 - Town Boundary
 - Parcels
 - Buildings
 - Cemetery - Roads
 - Road1
 - Road2
 - Road3
 - Road4
 - Pavement Markings
 - Impervious Surface - For B
 - Street
 - Sidewalk
 - Street Island
 - Driveway
 - Parking Lot
 - Bike Path
 - Roads - For Large Scale (F)
 - Roads - For Small Scale (f)
 - Major Road
 - Local Road
 - Master Plan Base Map - M
 - Water Line
 - Water Body

- Roads - For Large Scale (F)
- Major Road
 - Local Road
- Master Plan Base Map - M
- Water Line
- Water Body

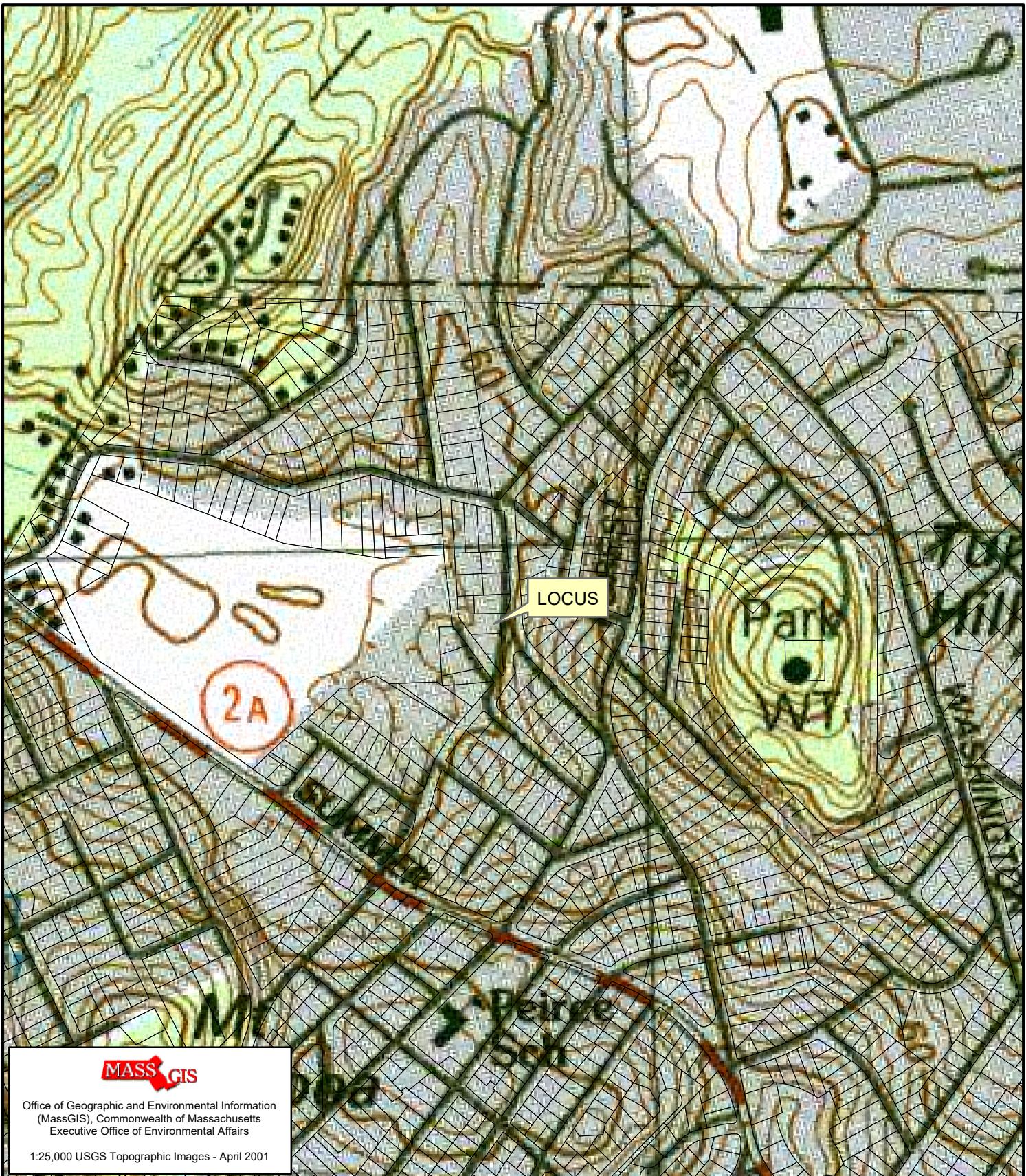
Appendix B

Locus Maps

Figure 1: USGS Topographic Quadrangle

Figure 2: FEMA Flood Insurance Rate Map

Figure 3: MassGIS OrthoPhoto & NHESP Estimated Habitat Map



Environmental Consultants, Inc.

Wakefield, MA
781.245.2500

www.lecenvironmental.com

Figure 1: USGS Topographic Map
64 Wright Street
Arlington, MA

November 4, 2021



0 250 500 Feet
131 of 139

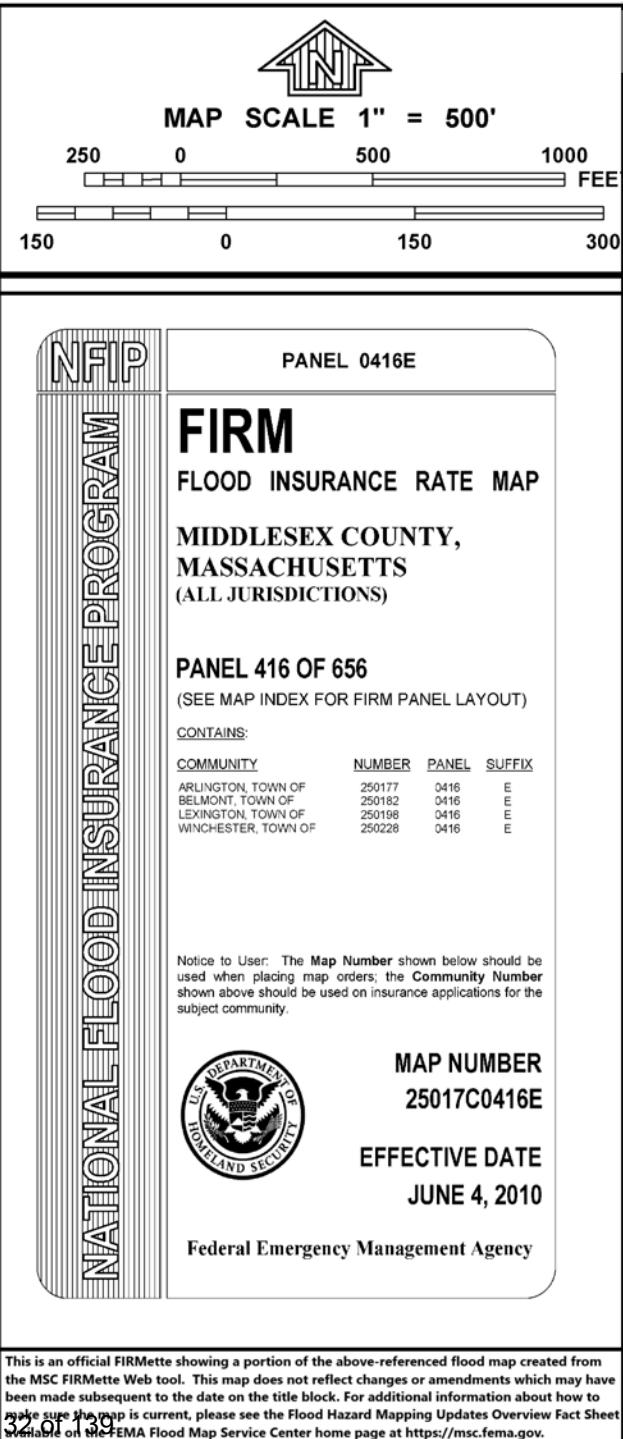
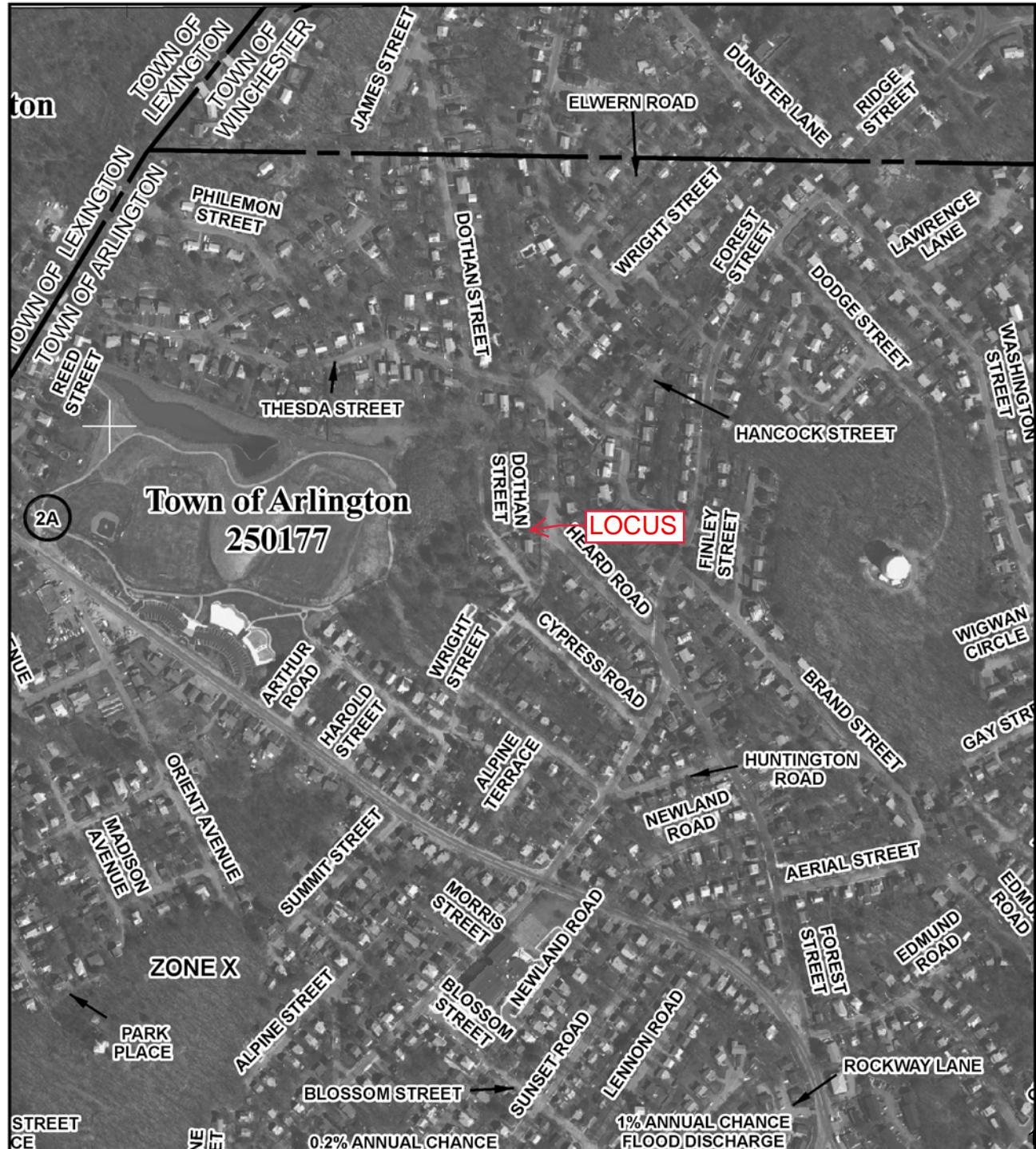


Figure 2: FEMA Flood Insurance Rate Map

LEGEND



SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



OTHER FLOOD AREAS

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.



OTHER AREAS

- Areas determined to be outside the 0.2% annual chance floodplain.
- Areas in which flood hazards are undetermined, but possible.



COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.



1% annual chance floodplain boundary



0.2% annual chance floodplain boundary



Floodway boundary



Zone D boundary



CBRS and OPA boundary



Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.



Base Flood Elevation line and value; elevation in feet*



Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988



Cross section line



Transect line

87°07'45", 32°22'30"

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

2476^{000m}N

1000-meter Universal Transverse Mercator grid values, zone 19

600000 FT

5000-foot grid values: Massachusetts State Plane coordinate system, Mainland zone (FIPSZONE 2001), Lambert Conformal Conic projection

DX5510 X

Bench mark (see explanation in Notes to Users section of this FIRM panel)

● M1.5

River Mile

MAP REPOSITORY

Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

June 4, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

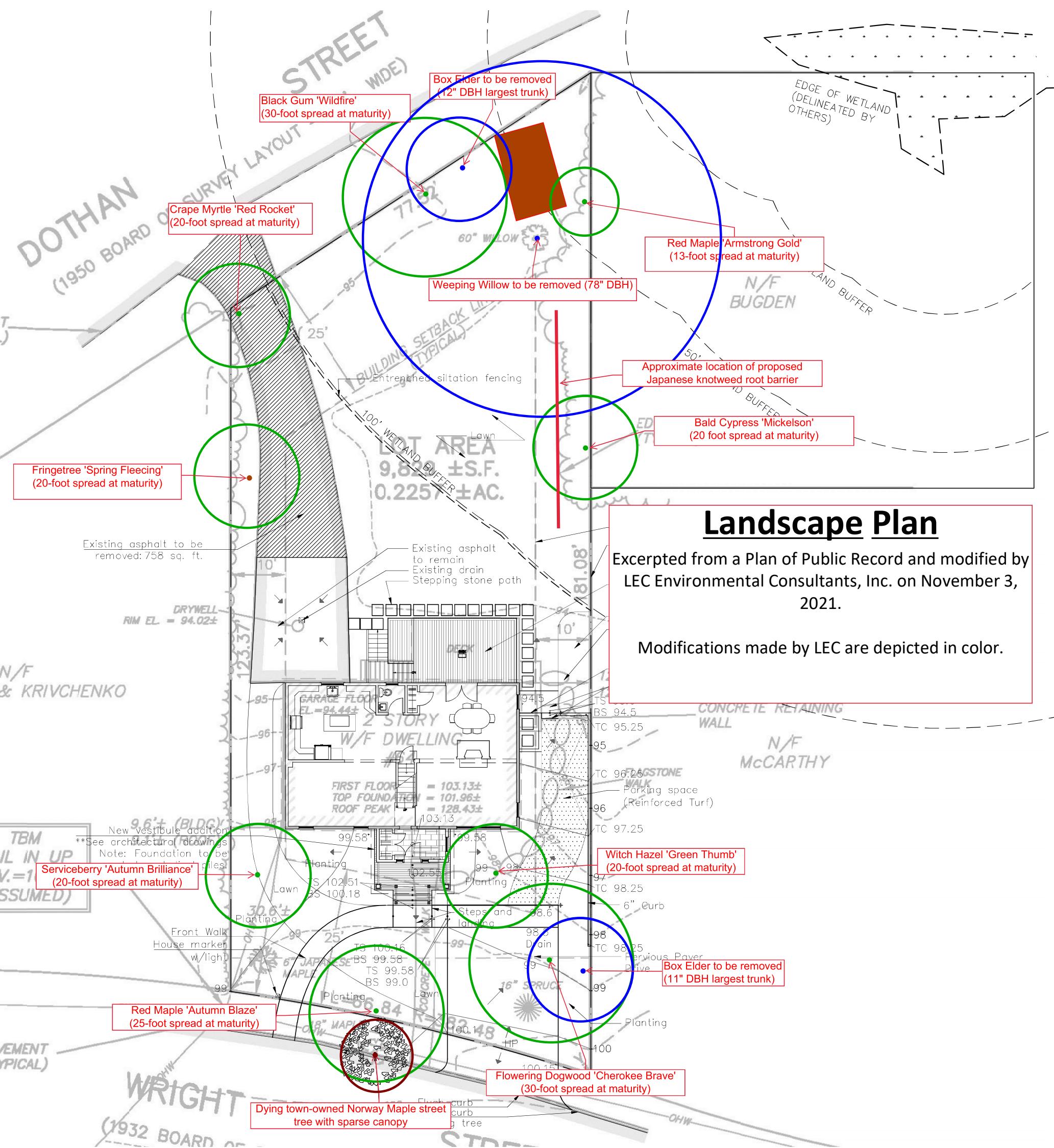


Figure 3: MassGIS Orthophoto & NHESP Map
 64 Wright Street
 Arlington, MA

November 4, 2021

Appendix C

Landscape Plan, as taken from a plan of public record
and modified by LEC Environmental Consultants, Inc. on November 3, 2021



Appendix D

Tree Assessment Report
prepared by Keith Bernard, Certified Arborist of Barrett Tree Service East, Inc.
dated July 9, 2021



340 Middlesex Ave Medford MA 02155
617-616-5281

July 9, 2021

Gayle Namchuk
64 Wright St
Arlington MA 02474

Gayle:

Attached are my observations of the rear Willow along the northwest border I recently inspected. Please review the Tree Assessment Report.

Sincerely,

A handwritten signature in black ink that reads "Keith E. Bernard".

Keith E Bernard
ISA Certified Arborist, RM-0872B, TRAQ
MAA Certified Arborist, 2124
Barrett Tree Service East, Inc.



340 Middlesex Ave Medford MA 02155
617-616-5281

July 12, 2021

Gayle Namchuk
64 Wright St
Arlington MA 02474

Client:

Tree Assessment

Subject: An approximately 78" DBH Weeping Willow (*Salix babylonica*), with an approximately 80' height and 65' spread, located along the northwest border of 64 Wright St. Arlington, MA.

Method: A limited Level II visual inspection performed from the ground on July 9, 2021 by Keith Bernard, Certified Arborist.

Targets and site: The target zone is the area where the tree or portions of the tree are likely to land if it were to fail. The target zone radius is equal to 1.5 times the height of tree and includes: portions of Dothan St; utility lines; client's shed, yard and house; neighboring homes and properties.

Conditions: The tree has significant structural defects apparent from ground examination. Along the main stem are exposed cavities, indicating advanced internal decay. Presence of wildlife (in particular raccoons) were observed nesting within lower trunk cavities, suggesting that the hollows are of some size. There is a historical record and evidence of past storm damage and stem failures on major leaders throughout the canopy, as well as stem failures in recent years.

There is record of active maintenance and preservation care over the past decade, including preventative pruning and installation of supplemental support systems, as well as storm damage restoration pruning.

The tree exhibits signs of canopy decline and branch tip dieback. The tree's ability to effectively compartmentalize (i.e. seal) past wounds (from storm damage and pruning) is poor.

Analysis: The size, species, age, growing environment and multiple defects noted are well-defined, significant and compromise the structural integrity of the tree. The likelihood of continued failure, under normal weather conditions, within a 1-3 year period is **probable**. The likelihood of impacting a target is high, making the likelihood of failure and impact is **likely**. Consequences are categorized as significant, making this a **high-risk** situation.

Recommendations: Due to current observed conditions, past history and potential damage to surrounding targets due to failure, tree removal is recommended. Because of the size and compromised structural integrity of the tree, a crane is the preferred removal method. Site limitations and equipment access to adjacent and properties may be required for its safe and efficient removal.

Keith E Bernard
MAA & ISA Certified Arborist, TRAQ
Barrett Tree Service East, Inc.